

United States Marine Corps  
Command and Staff College  
Marine Corps University  
2076 South Street  
Marine Corps Combat Development Command  
Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

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**TITLE:**

**Relevance of Riverine Capability for Today's Portuguese Navy**

SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF MILITARY STUDIES


**AUTHOR: LCDR Clemente M. Fernandes Gil, Portuguese Navy**

**USMC Command and Staff College**

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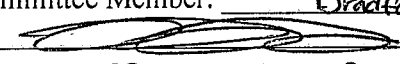
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Mentor and Oral Defense Committee Member: Mark Jacobsen

Approved: 


Date: 27 March 2009

Oral Defense Committee Member: Bradford Wineman

Approved: 

Date: 27 MARCH 2009

Oral Defense Committee Member: JOHN P. CANN

Approved: 

Date: 27 MARCH 2009

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>Relevance of Riverine Capability for Today's Portuguese Navy</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>United States Marine Corps,Command and Staff College, Marine Corps Combat Development Command,Marine Corps University, 2076 South Street,Quantico,VA,22134-5068</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>57</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

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## GLOSSARY

Acronym / Abbreviation	Description
ACTOV	Accelerated Turnover to Vietnam
AFDL	<i>Alliance des Forces Démocratiques pour la Libération du Congo-Zaïre</i> (Alliance of Democratic Forces for the Liberation of Congo-Zaire)
AO	Area of Operations
ASPB	Assault Support Patrol Boat
ATC	Armored Troop Carriers
BMEO	<i>Brigade Marine d'Extreme Orient</i> (Far East Naval Brigade)
CCB	Command and Communications Boat
CEDN	<i>Conceito Estratégico de Defesa Nacional</i> (Strategic Concept of National Defense)
CEMGFA	<i>Chefe do Estado-Maior General das Forças Armadas</i> (Chief of the General Staff)
CJSOTF	Combined Joint Special Operations Task Force
CNO	Chief of Naval Operations
COMNAVFORV	Commander Naval Forces, Vietnam
COMUSMACV	Commander US Military Assistance Command, Vietnam
CPLP	<i>Comunidade dos Países de Língua Portuguesa</i> (Community of the countries that use the Portuguese as official language)
DS	Direct Support
EEIN	<i>Espaço Estratégico de Interesse Nacional</i> (Strategic Area of National Interest)
ESDP	European Security and Defense Policy
EU	European Union
FAR	<i>Forces Armées Rwandaises</i> (Rwandan Armed Forces)
FAZ	<i>Forces Armées Zairoises</i> (Zairian Armed Forces)
FOC	Full Operational Capability
FORREG	<i>Força de Recolha para a Guiné-Bissau</i> (Guinea Evacuation Force)
FORREZ	<i>Força de Recolha para o Zaire</i> (Zaire Evacuation Force)
FRELIMO	<i>Frente de Libertação de Moçambique</i> (Liberation front of Mozambique)
HQ	Head Quarters
JTF	Joint Task Force
LCM	Landing Craft Mechanized
LDG	<i>Lancha de Desembarque Grande</i> (Landing Craft Large)
LDM	<i>Lancha de Desembarque Média</i> (Landing Craft Medium)
LDP	<i>Lancha de Desembarque Pequena</i> (Landing Craft Small)
LPD	Landing Platform, Dock
LST	Landing Ship, Tank
MEF	Marine Expeditionary Force
MONUC	<i>Mission de l'Organisation des Nations Unies en République Démocratique du Congo</i> (United Nations Mission in the Democratic Republic of the Congo)
MPLA	<i>Movimento Popular de Libertação de Angola</i> (Popular Movement for the Liberation of Angola)
MRF	Mobile Riverine Force
NATO	North Atlantic Treaty Organization
NECC	Navy Expeditionary Combat Command

NEO	Non-Combatant Evacuation Operation
NM	Nautical Mile
OPCON	Operational Control
OSCE	Organization for Security and Co-operation in Europe
PAIGC	<i>Partido Africano da Independência da Guiné e Cabo Verde</i> (African Party for the Independence of Guinea and Cape Verde)
PBR	Patrol Boat, River
PCF	Patrol Craft, Fast
RIB	Rubber Inflatable Boat
RIVRON	Riverine Squadron
ROE	Rules of Engagement
RSSZ	Rung Sat Special Zone
SEA LORDS	South East Asia Lake, Ocean, River, and Delta Strategy
SOF	Special Operations Forces
SOP	Standing Operating Procedures
SRT	Special Reconnaissance Team
SURC	Small Unit Riverine Craft
TACON	Tactical Control
TF	Task Force
TG	Task Group
TU	Task Unit
UAV	Unmanned Aerial Vehicle
UN	United Nations
UPA	<i>União das Populações de Angola</i> (Union of the Populations of Angola)
WPB	Water Patrol Boat

## EXECUTIVE SUMMARY

**Title:** Relevance of Riverine Capability for Today's Portuguese Navy

**Author:** LCDR Clemente Manuel Fernandes Gil, Portuguese Navy

**Thesis:** Although Portugal is presently facing a different set of circumstances than those of the colonial period, its commitment to NATO, the European Union (EU), the United Nations (UN), and the Portuguese communities in the world suggest that a riverine capability and the means to project it is as relevant for today's Portuguese Navy as it was in the past.

**Discussion:** Portuguese riverine forces during the colonial wars in Africa and the US riverine fleet in Vietnam are good examples of how amphibious forces operating in inland waters can play a decisive role in a counterinsurgency environment. The two countries developed their riverine forces in light of the French experience in Indochina. Each force was built in accordance with the economic, technological, and military realities of each country. While the US was able to use resources and technology that were not available to the Portuguese and the French, the US and Portuguese experiences both suggest that the establishment of a credible riverine force is a painful and slow process. In the end, both forces so hardly established were dissolved as national interests shifted. In the case of Portugal, the fleet was largely worn out and was abandoned to the former colonies as it turned towards NATO. In the case of the United States, the fleet was abandoned to the Vietnamese navy, as it turned towards fighting the Cold War. Portuguese National and Naval strategies suggest that Portugal is strongly committed to its alliances and to the Portuguese communities in the world. However, the three post-colonial war interventions in Africa suggest that the Portuguese Navy has a deficit both in riverine capabilities and in the means to project them. This shortage, combined with the determination to achieve the strategic objectives, forced men and equipment to take additional risks while accomplishing the assigned tasks.

**Conclusion:** Portuguese and American experiences suggest that a riverine capability cannot be established easily and quickly according to the immediate operational needs. On the contrary, it should be preserved and practiced, to give the political leadership and the military commanders another tool to accomplish their objectives, in a conventional or unconventional scenario, and to avoid unnecessary risks. Specifically, Portugal should expedite the LPD project as a means to improve its force projection capability along the littorals and in the waterways. Additionally, Portugal should acquire a new riverine asset, capable of operating in a coastal and riverine environment, to complement the Rubber Inflatable Boat. The Small Unit Riverine Craft that the US Navy is using in the inland waters of Iraq seems to be a good reference due to its organic fire support and transportation capacity.

### **DISCLAMER**

THE OPINIONS AND CONCLUSION EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE, THE PORTUGUESE NAVY, OR ANY OTHER U.S. OR PORTUGUESE GOVERNMENT AGENCIES. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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## PREFACE

The idea of writing a research paper on the relevance of the Portuguese Riverine capability occurred after receiving an email and a signed copy of Professor John Cann's *Brown Waters of Africa* and *Counterinsurgency in Africa*, in my early days at Marine Corps Command and Staff College – Marine Corps University. I was impressed by the Portuguese achievements and early effort to establish a riverine fleet and to adapt its naval strategy to support three simultaneous counterinsurgency wars in Africa. Being myself Portuguese, and believing that history is a good window to look to the future, I started wondering what lessons could be drawn from our past experience that would be relevant for today's Portuguese Navy.

Recalling my experience from two Non-combatant Evacuation Operations in the Republic of Zaire in 1997 and in Guinea-Bissau in 1998, I felt that the lack of better riverine assets and the means to project power effectively forced the commanders on the scene to take additional risks to accomplish their missions.

Few weeks after my first contact with Professor Cann, Professor Mark Jacobsen, from Command and Staff College, contacted me and told me he would be my thesis advisor, together with Professor Cann. After a revealing conversation and after reading a few books that Professor Jacobsen had mentioned, I was able to identify some similarities between the Portuguese experience in Africa and the US experience in Vietnam. Both riverine navies were difficult to build, both played decisive roles, and both faced similar destinies at the end of the conflicts. Interestingly, the US Navy once again had to start from scratch to build a riverine capability in order to help fighting a counterinsurgency campaign in Iraq.

This paper will focus on some of the most relevant aspects of each experience and will seek to capture some lessons that may be relevant for the future of the Portuguese Navy.



## ACKNOWLEDGMENTS

A good number of relatives and friends gave their time to read and criticize all or portions of my writing, or to send me material for my research from Portugal. First I must thank my wife Cecília for her permanent support and for acting as my personal critical reader. Among those that made constructive suggestions are my MMS mentors Professor John Peter Cann and Professor Mark Jacobsen, without whom this project would have never been possible. Their patience and wise guidance were decisive, and I will always be thankful to them.

I would also like to acknowledge my brother André Gil, my brother in law Rui Gonçalves, the Portuguese Marine Corps (*Corpo de Fuzileiros*), Commander *Marinha* Marcelo Correia, Commander *Fuzileiro* Martins de Brito, Commander *Fuzileiro* Gomes Tavares, Commander *Marinha* Graça Barreiro, First Lieutenant *Fuzileiro* Mendes Afonso, First Lieutenant *Fuzileiro* Licínio Silva, Second Lieutenant *Fuzileiro* Fonseca Freire, *Clube Militar Naval*, and Sergeant SGE Rodrigues from the *Direcção de História e Cultura Militar*, for all the important documents they sent me from Portugal.

One special word is also due to First Lieutenant *Fuzileiro* Drago Gonçalves, former SRT commander in EUFOR RDC, and Lieutenant Commander Bryan Hudson, United States Navy, former Operations Officer for RIVRON 2 in Iraq, for sharing their experiences and allowing them to be used in the present work.

Finally, I must acknowledge the contributions of my faculty advisors Lieutenant Colonel Darren Denny, Associate Professor Eric Shibuya, and Assistant Professor Erin Simpson, as well as my classmates from Conference Group One, in the form of daily exchange of ideas and as specific contributions for my MMS. Among the classmates, my sponsor Major Wade Nordberg, USMC, Lieutenant Colonel Brian Neil, USMC, Major James McBride, USMC, Lieutenant Commander (Indian Navy) Uday Pinninti, Major Patrick Costello, US Army, and Major Brian Cunningham, US Army, deserve special mention.

## INTRODUCTION

*Riverine warfare is a convenient term for any projection of raw sea power into inland waters, including rivers that open to the sea. Riverine war is not war on the rivers quite so much as it is war from the rivers. It calls for special naval equipment, and skills. Improvisation is expensive and usually slow. It can form a crucial aspect of inshore war.<sup>1</sup>*

Portuguese riverine forces during the colonial wars in Africa and the US riverine fleet in Vietnam are good examples of how amphibious forces operating in inland waters can play a decisive role in a counterinsurgency environment. The two countries developed their riverine forces in light of the French experience in Indochina. Each force was developed in accordance with the economic, technological, and military realities of each country, and while the US was able to use resources and technology that were not available to the Portuguese and the French, the US and Portuguese experiences both suggest that the establishment of a credible riverine force is a painful and slow process. In the end both forces gained so painstakingly were dissolved as national interests shifted. In the case of Portugal, the fleet was largely worn out and was abandoned to the former colonies as it turned towards NATO and the European Union. In the case of the United States, the fleet was abandoned to the Vietnamese navy, as it turned towards fighting the Cold War.

Although Portugal is presently facing a different set of circumstances than those of the colonial period, its commitment to NATO, the European Union (EU), the United Nations (UN), and the Portuguese communities in the world suggest that a riverine capability and the means to project it is as relevant for today's Portuguese Navy as it was in the past. This paper will first examine the Portuguese Navy effort to adapt to the realities of the colonial wars in Africa and its achievements and seek to capture lessons that can be relevant for today. Second, it will examine the most recent deployments to Zaire, Guinea-Bissau, and the Democratic Republic of the Congo, in light of its national and naval strategies in an effort to explain the Portuguese commitment to its alliances and to the Portuguese communities in the world. Lastly, the US riverine experience in Vietnam will be examined for its lessons of

flexibility and adaptability to the changing circumstances of conflict, and this will be used as a comparative analysis of the reestablishment of a riverine capability to patrol the rivers of Iraq. The conclusion will draw on all of these elements in pointing the way forward for the Portuguese Navy.

## **PORTUGUESE EXPERIENCE**

### **Colonial Wars**

Portugal fought three simultaneous counterinsurgency wars in three widely separated theaters – Angola (15 March 1961 – 25 October 1974), Guinea-Bissau (31 Jan 1963 – 22 June 1974), and Mozambique (September 1964 – 07 September 1974).<sup>2</sup> The total land area of these theaters (2,085,400 Km<sup>2</sup>) is approximately twenty four times the size of Portugal and the coast line, with approximately 2,483.8 nautical miles (NM), is more than two and a half times longer than that of Portugal.<sup>3</sup> Beyond that, the approximately 920 NM of navigable rivers and waterways, and the 120 NM coast of Lake Niassa were infiltration routes for the insurgents and important lines of communications for the Portuguese.<sup>4</sup>

The unstable situation in the Belgian Congo from 1956 onwards and the increasing activity of the nationalist movements in the former Portuguese colonies formed the basis for a need to adapt the Portuguese Navy for the likelihood of a military conflict in Africa.<sup>5</sup> To gain operational control of its various theaters, the Navy created the Naval Commands of Angola and Mozambique in 1957, and the Naval Commands of the Continent, Cape Verde and Guinea-Bissau in 1958.<sup>6</sup> Along with this reorganization, the Navy was also forced to reconsider its priorities to face the new scenario. From 1949 to 1960 the Navy's primary focus had been its commitment to NATO, which provided it with the opportunity to improve its proficiency in anti-mine and anti-submarine warfare and, at the same time, receive financial assistance and technical support from the United States and British.<sup>7</sup> From 1960 onwards circumstances led it to consider Africa as its priority without turning its back to NATO.<sup>8</sup>

Regardless of its lack of experience with the anticipated force of small vessels and its specialized requirements for landing detachments, the Navy developed an ambitious construction program to fill what it saw as a need to strengthen the naval presence in the Portuguese overseas territories of the *ultramar* against the threat of subversive war. It ultimately acquired the capability of an inshore and riverine force complete with the specialized manpower to project power ashore.<sup>9</sup> The riverine fleet grew from nine patrol vessels and one gunboat in 1957 to fourteen patrol vessels, twelve patrol launches, and one gunboat in 1961. The fleet continued to expand until 1971 when it reached a total of 134 riverine vessels: sixteen patrol vessels, 39 patrol launches, and 79 landing craft of three different sizes (see Appendix A). In 1957, only the gunboat (10 percent of the riverine fleet) was built in Portugal. In 1961, Portuguese naval construction was responsible for 33 percent of the existing riverine vessels. By 1971, 91 percent were being built in Portugal, as its shipbuilding skills and capabilities expanded.<sup>10</sup>

In January 1960, Commodore Roboredo e Silva, then Deputy Chief of Staff, recommended to the Navy Chief of Staff, Vice Admiral Sousa Uva, the recreation of the *Fuzileiros*, Portuguese Marines with a long and illustrious history who are especially trained to conduct amphibious assaults ashore, among other skills.<sup>11</sup> This concept was in keeping with the Portuguese Navy experience with landing forces (see appendix B) and also included important lessons from the French experience in Indochina.<sup>12</sup>

By December 1945, two months after arriving at Saigon, Commander François Jaubert, acting as Far East Naval Brigade (*Brigade Marine d'Extrême Orient*, or BMEO) commanding officer, recommended to General Philippe Leclerc, commander of the Far East French Forces, the establishment of a riverine force. This was seen as key to pacifying a country with a large number of waterways and a river-dependent enemy. With the designation of Naval Infantry River Flotilla, a new riverine amphibious force was established, initially using modified and refitted motorized barges as its landing craft and elements of the Far East Naval Brigade as the landing force. The concept matured during 1946 and 1947 through the

incorporation of British landing craft and the expansion of naval presence from Saigon to the Mekong delta.<sup>13</sup> After the dissolution of the BMEO in August 1947, the amphibious riverine forces were renamed *divisions navales d'assaut (dinassaut)* and their actions against the Vit-Minh would provide valuable lessons for the reestablishment of the *fuzileiros* by the Portuguese Navy and later for the American riverine forces in Vietnam.<sup>14</sup>

Beyond representing an improvement in the naval fighting capabilities, the purpose-trained *fuzileiros* replaced the ad hoc employment of a ship's company as landing forces.<sup>15</sup> Commodore Roboredo e Silva's proposal was approved and, as a consequence, one officer and three seamen attended the Commando Course at the British Infantry Training Centre, Royal Marines, from 22 August to 30 September 1960. This small group would be responsible for instructing the first course of the new generation of *Fuzileiros* in Portugal, between June and August 1961. The forty sailors and the six officers that attended the first course were the nucleus of Detachment of Special *Fuzileiros* Number One that served in Angola from 10 November 1961 to 14 July 1963.<sup>16</sup> The period 1961 to 1975 saw approximately 12,009 *fuzileiros* serving in Africa – 4,443 in Angola, 3,870 in Guinea-Bissau, 3,567 in Mozambique, and 129 in Cape Verde, a formidable specialized force developed from scratch.<sup>17</sup>

In the third quarter of 1960, Commander Pereira Crespo published an article that signaled a shift in the Navy's strategic vision from the traditional oceanic role toward a riverine one. After assessing the common mistakes in the early stages of the sort of insurgency Portugal was about to face, Crespo outlined six primary naval missions in a counterinsurgency scenario.<sup>18</sup> The most important was the control of the fluvial and maritime borders and the interdiction of enemy logistic lines of communication in order to limit the flow of arms and the infiltration of insurgents. Second was the critical task of the transporting and resupplying land forces in an environment with a significant amount of waterways. Third, as in conventional warfare, was the fire support of forces ashore, a traditional and key naval role. Fourth was the support to the police and other government law enforcement functions, as this allowed the Navy to protect the population better and facilitated the intelligence gathering

effort. Fifth was securing the waterways not just to maintain government presence throughout the territory but also to preserve commercial and personal links within the population. Sixth was the projection of power ashore against the insurgents.<sup>19</sup>

To emphasize the importance of these missions, Crespo highlighted the power projection capabilities, particularly in light of the fact that airfields can be easily neutralized by terrorist or guerrilla acts, unless important land resources are diverted from other tasks. As an alternative to this vulnerability, he cited the example of the British helicopter carrier *Bulwark*, which was capable of transporting 700 men and with their amphibious capability to project power ashore. Then, he stressed the relevance of the patrol boats, landing crafts, and *fuzileiros* to act along the waterways.<sup>20</sup>

During the period of the counterinsurgency wars, the Portuguese Navy "either performed or contributed to the performance of all these missions. It extended active Portuguese presence from the coast inland along the river routes, and in the case of landlocked waters, transported vessels overland to be used on these bodies. From judiciously situated depots and bases, it established and secured lines of communication in support of both near and remote populations and military operations."<sup>21</sup>

In Angola, the Navy initially secured the fluvial borders in the North, blocking the access of enemy material and personnel to the National territory. Further, it cooperated with the other services against the insurgency acts along the coast and river banks. It transported thousands of soldiers and hundreds of tons of equipment for the Army and other authorities.<sup>22</sup> When the insurgencies shifted their main effort to the east of Angola in 1966, the Navy responded deploying forces to Luso, Lungué-Bungo, Chilombo, Chiume, and Vila Nova da Armada (see Appendix C).<sup>23</sup> This inland movement required the transportation of three naval units for several months and for distances of more than 2,400 Km, through a combination of water, rail, and road systems.<sup>24</sup>

In Guinea, surveillance (*Fiscalização*) and quick reaction (*Intervenção*) were the main tasks that the Navy performed against the enemy. The surveillance was performed by patrol

boats, landing craft, and *fuzileiros* embarked or stationed along the rivers (see Appendix C). This activity, while it showed few immediate or tangible results, proved to be enormously important, because it created a sense of security within the population and threatened the main infiltration routes of the enemy. The quick reaction tasks were executed by the Detachments of Special *Fuzileiros*, alone or jointly with other services, using landing craft and rubber inflatable boats (RIBs). These tasks were normally conducted over a period of several days with the primary aim of neutralizing well known threats. Also, because the ground forces and the administrative authorities in remote areas exclusively depended on the waterways for their resupply, the Navy conducted almost continuous logistic support.<sup>25</sup>

In Mozambique, the geographic conditions were not as favorable for the effective employment of a riverine capability as in Angola or Guinea. There was no hydrographic basin as in Guinea, and there were no long navigable rivers, such as the Zaire in Angola, both of which constituted obvious penetration lines for the insurgents. Nevertheless, the Navy adapted to the circumstances and directed its biggest riverine effort to Lake Niassa, where the naval presence grew from one patrol boat in 1964 to five landing craft and nine patrol boats in 1969. The Launch Squadron there interdicted enemy penetration from the lake and supported the *fuzileiros*. Additionally, it provided logistical support to the military and the population.<sup>26</sup> Beyond that, the Detachments of Special *Fuzileiros* conducted regular ambushes, patrols, and raids along the coastline of Lake Niassa, Porto Amélia, Mocimboa da Praia, Mágoé, and Tete, supported by landing craft or patrol boats wherever the hydrographic conditions permitted (see Appendix C).<sup>27</sup>

At the end of the conflict, the *fuzileiros* were reduced by about fifty percent to 2,500 men, and most of the Portuguese riverine fleet was abandoned to the former colonies.<sup>28</sup> In 1976, the riverine fleet was reduced to 39 naval units: 10 patrol vessels, 16 patrol launches, and 13 landing craft and, in 2008, it was only composed of 17 vessels – four patrol vessels commissioned between 1969 and 1973, 12 patrol launches (two commissioned in 1975, five commissioned in 1991, one commissioned in 2000, and three commissioned in 2001) and one

landing craft commissioned in 1985 (see Appendix A).<sup>29</sup> Further, because the Portuguese economy was so weakened by the 13-year war, and its military was no longer training and was dabbling in politics, the US provided military aid to get the Portuguese Armed Forces retrained, out of politics, and back into the NATO game.<sup>30</sup>

### Congo – Zaire

Portuguese commitment to Africa would regain relevance with the end of the Cold War, even though colonialism and Counterinsurgency were gone.

Following the French humanitarian intervention in Rwanda in July 1994 and the successful *coup d'état* in Burundi in the summer of 1996, Laurent Kabila organized and led the Alliance of Democratic Forces for the Liberation of Congo-Zaire (AFDL) against the Zairian Army (FAZ) and the Mobutu-led Zairian government.<sup>31</sup> As it became apparent that the expanding conflict would reach Zairian capital Kinshasa and could endanger the estimated 250 Portuguese living there, Portugal decided to take action.<sup>32</sup> From the 6<sup>th</sup> to the 15<sup>th</sup> of May 1997 joint task force (JTF) FORREZ, composed of 128 service members under the command of Commander *Fuzileiro* Loureiro Nunes, deployed to Brazzaville (Republic of the Congo) ready to cross the Zaire River to the south and evacuate the Portuguese citizens from Kinshasa. As the available means and the conditions in Zaire would not permit the use of aircraft for this mission, the only viable solution was a riverine evacuation.<sup>33</sup>

The Non-combatant Evacuation Operation (NEO) would be conducted in coordination with the Portuguese embassy in Kinshasa, according to the following plan (see Appendix D): A landing force commanded by Lieutenant *Fuzileiro* Freitas Coroado and composed of a platoon of *fuzileiros*, a team of *fuzileiros* Special Operations Forces (SOF), a platoon of Army SOF, and a section of fourteen RIBs would cross the Zaire River and secure the Sicotra Pier in Kinshasa. The situation in Kinshasa was assessed to be “a threat to the physical well-being” of Portuguese citizens.<sup>34</sup> Next, they would be transported from the Portuguese School (*École Portugaise*) and the Portuguese Embassy in Kinshasa to the pier and from there to the



northern bank of the Zaire River (Brazzaville, Republic of the Congo). Once in the northern side, they would be transported to the Lumumba School (*Lycée Lumumba*) and to the *École Supérieure Africaine des Cadres du Chemin de fer* (ESACC) to be processed and later flown to Portugal. The plan also specified that during the river crossings each RIB transporting evacuees would have a minimum crew of two. Considering that the RIBs have a defined maximum transportation capacity of six people, this necessary operational constraint would leave room for only four evacuees per RIB.<sup>35</sup> The second platoon of *fuzileiros* was tasked as the reserve and would stay on order in the northern bank.<sup>36</sup>

The plan was never activated, as on 15 May the AFDL troops entered Kinshasa without opposition and the Mobutu generals pledged fidelity to Kabila. As no Portuguese lives were in danger anymore, FORREZ redeployed to Portugal, from the 27<sup>th</sup> to the 29<sup>th</sup> of May, using a C-130 aircraft and a Portuguese commercial flight.<sup>37</sup>

Had the evacuation of the 250 Portuguese from Kinshasa been ordered, it would have been necessary to make eight river crossings (four with evacuees), using fourteen RIBs, and two additional crossings (one with evacuees), using seven RIBs. Additionally, all the two NM crossings would have been made with the RIBs, *fuzileiros*, and evacuees exposed to potential engagements. Beyond that, the austere conditions of the RIBs would have had limited capability to transport injured or aged evacuees.

### **Guinea-Bissau**

Soon after the civil war in Guinea-Bissau ended on 07 June 1998, the rebel leader Brigadier Assumane Mané, supported by ninety percent of the army, assumed control of most of the country, including the international airport of Bissau and some Army bases. President João Bernardo “Nino” Vieira, supported by Senegalese and Guinean troops, retained control of Bissau proper.<sup>38</sup> Portugal started planning for the likelihood of a NEO (Plan “Crocodilo”) in March 1998 and received authorization from Senegal and Cape Verde to position a national military force in those countries. Military cooperation from France and the United States was

also assured.<sup>39</sup> Plan "Crocodilo" was activated on the 8<sup>th</sup> of June by the Chief of the General Staff (CEMGFA), General Espírito Santo. The plan established JTF FORREG, under the command of Air Force Colonel Esteves Araújo, tasked to evacuate Portuguese and foreign citizens that wished to abandon Guinea-Bissau.<sup>40</sup>

On 12<sup>th</sup> of June JTF FORREG had established its Head Quarters (HQ) in the Senegalese capital of Dakar, together with three C-130 aircraft and two platoons of Army SOF. At this stage the plan called for an airborne NEO between Bissau and Dakar.<sup>41</sup> When it became clear that the Bissau airfield was not safe and Senegalese cooperation was not as broad as it had been anticipated, FORREG HQ moved to Cape Verde on the 14<sup>th</sup>, and the maritime option became the only one.<sup>42</sup>

Under the command of Captain Fernando de Melo Gomes, the naval component of the FORREG<sup>43</sup> received the orders to prepare on the 9<sup>th</sup> of June and two days later departed Lisbon and arrived opposite Guinea-Bissau on the 15<sup>th</sup>. The next day, the NEO started with about 355 evacuees being transported in twenty RIBs from Bissau to the frigate *N.R.P. Vasco da Gama* and to the corvettes *N.R.P. Honório Barreto* and *N.R.P. João Coutinho*, and thence to Cape Verde.<sup>44</sup> On the 14<sup>th</sup> of July, the two corvettes returned to Lisbon after evacuating 571 citizens and delivering forty tons of humanitarian aid.<sup>45</sup> *Vasco da Gama* was relieved in place by her sister frigate *N.R.P. Corte Real* on the 21<sup>st</sup> of July and together with *N.R.P. Bérrio* returned to Lisbon on the 24<sup>th</sup>, following the evacuation of 1237 citizens of 33 different nationalities and delivering 44 tons of humanitarian aid. *Corte Real* would return to Portugal on the 3<sup>rd</sup> of September, after evacuating 334 more citizens and delivering four tons of humanitarian aid. Her two Lynx MK95 helicopters flew 89 hours, 18 of these during the night, "under very difficult conditions."<sup>46</sup>

Along with the NEO, the Naval Force secured the Portuguese embassy in Bissau with the reconnaissance platoon. The peace agreement between the Government of the Guinea-Bissau and the rebels was signed on board the *Corte Real* on the 26<sup>th</sup> of July.<sup>47</sup>

Despite the political and military successes, the absence of a LPD and more capable riverine assets forced the Naval Force to operate close to the coast and take several risks in conducting this operation. Although it was not possible to confirm any signs of intentionality, when *Vasco da Gama* approached Bissau for the first evacuation, one artillery or mortar shell fell about fifty meters from the ship.<sup>48</sup> Also *Corte Real* saw four artillery grenades falling close when she was transferring humanitarian aid to one Landing Craft of the Guinean Navy.<sup>49</sup> Other limitations included the very austere conditions on board for the landing force and the refugees, as well as the small transportation capability of the RIBs that required the force to operate in risky areas for extended periods.<sup>50</sup>

### **Democratic Republic of the Congo**

Following United Nations Security Council Resolution 1671 of 25 April 2006, Portugal integrated the European Union Force (EUFOR RDC) in support of the United Nations Mission in the Democratic Republic of the Congo (MONUC). Portuguese participation included a task unit (TU) of thirty *fuzileiros* SOF, commanded by Lieutenant Commander *Fuzileiro* Pedro Fernandes Fonseca, and supported by sixteen Air Force military personnel and one C-130 aircraft.<sup>51</sup> Between 14 July and 30 November 2006 this TF was positioned on Port Gentile, Gabon, as part of the Combined Joint Special Operations Task Force (CJSOTF).<sup>52</sup> Over the entire period the *fuzileiros* conducted several tasks of special reconnaissance and direct action, as well as combined exercises in Gabon and in the Congo.<sup>53</sup>

Lieutenant *Fuzileiro* Nuno Drago Gonçalves, commander of the Special Reconnaissance Team (SRT) for the Portuguese TU, used the organic RIBs to conduct three operations. He considered the RIBs to be best means his reconnaissance group had available to approach the objectives silently using the waterways.<sup>54</sup> However, he felt it very difficult to carry all the equipment (essentially communications, water, and food) on the RIBs, and was forced to deploy only two *fuzileiros* on each RIB. This situation had the inconvenience of multiplying the number of RIBs needed and also increased the time necessary to deploy to the

objective area and to camouflage the RIBs. These two limitations complicated the timing and security considerations of the SRT.<sup>55</sup>

## **NATIONAL AND NAVAL STRATEGIES**

The 2003 Strategic Concept of National Defense (CEDN) highlights the Portuguese commitment to the United Nations, the NATO, and the European Union, particularly in combating terrorism, crisis response, peace support and humanitarian operations. The community of countries that use Portuguese as their official language (CPLP) and the Portuguese communities around the world are also considered part of the strategic area of national interest (EEIN)<sup>56</sup>. The Concept is based on the premise that the importance of the CPLP should be strengthened by reinforcing its defense dimension and developing military and non-military cooperation with its members both multilaterally and individually. Beyond that, the document specifically states that the Portuguese Armed Forces must have the capability to protect and evacuate Portuguese citizens from areas of tension or crisis.<sup>57</sup>

In 2002, it was estimated the Portuguese Communities in the world to be approximately 4.5 million – 2.78 million in the Americas, 1.23 million in Europe, 0.34 million in Africa, 0.16 million in Asia, and 0.03 million in Oceania (see Appendix E).<sup>58</sup> In the Americas, it was estimated that 14.37 percent of the Portuguese (400,000) were living in Venezuela, a country with approximately 1,500 NM of coastline and 3,800 NM of navigable waterways.<sup>59</sup> In Africa, 10.55 percent of the Portuguese (36,056) were assessed to live in Angola, Cape Verde, Democratic Republic of the Congo, Guinea-Bissau, Mozambique, Morocco, São Tomé e Príncipe, and Republic of Congo.<sup>60</sup> Beyond a total coastline of more than 4,000 NM, these countries have approximately 10,000 NM of navigable Waterways.<sup>61</sup> Finally, in Asia, more than 97 percent of the Portuguese (160,960) were assessed to live in Thailand, Hong-Kong, and Macau.<sup>62</sup> These regions have approximately 2,156 NM of coastline and 2,159 NM of navigable waterways.<sup>63</sup> All these countries rank in the first half of the most unstable in a list of 177 countries (see Appendix F).<sup>64</sup>

Within the CEDN, the 17<sup>th</sup> Portuguese Constitutional Government established as the fundamental objectives of national defense the capability to project security within its alliances (UN, NATO, EU, OSCE, and CPLP) and the pursuit of international security and peace. The Government also stressed the importance of strengthening the relations with the countries of the CPLP, where the Defense dimension is particularly included.<sup>65</sup>

In 2004, Former Navy Chief of Staff, Admiral Francisco Vidal Abreu, on his vision about the Navy of the Future, observed that there is now a low probability of major oceanic confrontations and that the most likely military actions will be expeditionary in nature and will require good force projection capabilities. The anticipated entry into service of a Portuguese built amphibious ship (LPD) in 2009/2010 was seen as a major step toward enhancing these capabilities. He further identified crisis response, peace support, and humanitarian operations as the most likely scenarios in the future. Vidal Abreu also observed that the trend is for the navies to approach the littoral and, as a consequence, it will be necessary to strengthen the amphibious component and the employment of *fuzileiros* in the Portuguese Navy.<sup>66</sup>

In 2005, the LPD program initiated in 1997 suffered a setback, with the Viana do Castelo shipyards delaying the beginning of the construction to 2009 and postponing the commissioning of the ship to 2013. Still, the LPD is expected to act as a command and control platform for amphibious operations and to transport a motorized battalion of 650 men fully equipped. Further, it will have organic force projection means, such as four landing craft of 25 meters each and will be capable of operating four medium helicopters EH-101 or six Lynx MK95 helicopters.<sup>67</sup>

Along the lines of his predecessors, on 15 February 2006, Navy Chief of Staff, Admiral Fernando de Melo Gomes, emphasized the Navy's role in support of foreign policy and defined as one of his objectives the strengthening of naval capabilities, particularly to those that strengthen the expeditionary character of the Navy.<sup>68</sup>

In response to the national and naval strategies, the Navy Staff defined military defense and support of foreign policy as one of the three roles (*funções*) of the national naval power.<sup>69</sup> Refining this further, the Staff identified the following relevant tasks from an expeditionary riverine standpoint: a) force projection in any part of the EEIN; b) gathering, treatment, and dissemination of intelligence; c) collective defense within NATO; d) operations in support of international peace and security; e) protection and evacuation of national citizens from areas of tension or crisis; f) peace and humanitarian missions; and g) international unilateral and multilateral military cooperation.<sup>70</sup>

On 29 March 2007, João Mira Gomes, Portuguese State Secretary for National Defense and Maritime Affairs, prior to the Portuguese Presidency of the Council of the European Union, identified terrorism, the proliferation of weapons of mass destruction, regional conflicts, and organized crime as the main concerns for the European Security and Defence Policy (ESDP). He also defined as one of the Portuguese priorities for the presidency the maintenance of the PESD commitment in Africa, especially through missions of security. Mira Gomes cited as examples the above mentioned 2006 mission in the Democratic Republic of the Congo and others he considered having high priority for Portugal.<sup>71</sup>

## **AMERICAN EXPERIENCE**

### **Vietnam War**

Portugal is not the only nation to have extensive riverine operations in the Cold War. The US developed a very robust inshore riverine force in Vietnam during the 1960s and also achieved considerable successes.

As the United States increased its commitment to prevent communism from spreading, several studies were conducted on the feasibility of establishing a US naval presence in Vietnam. In January 1964 a group under the leadership of Capt. Phillip H. Bucklew reported that communist forces were using the rivers of the delta for transporting personnel and munitions. The group advised that a river force comprised of river patrol boats and a landing

force be created and deployed into the waterways of the Mekong Delta to stop the communist Viet Cong infiltration.<sup>72</sup>

In February 1965 the detection and seizure of a North Vietnamese supply ship lying in Vung Ro Bay on South Vietnam's central coast, known as the "Vung Ro Incident," led to Market Time, the US Navy's first large-scale operational participation in Vietnam.<sup>73</sup> For five years, Task Force 115 (Coastal Surveillance Force) conducted surveillance, gunfire support and search and seizure operations along the three mile territorial waters and the twelve mile contiguous zone of South Vietnam "in order to assist the Republic of Vietnam in detection and prevention of Communist infiltration from the sea."<sup>74</sup>

During the entire period, the adaptation of men and equipment to the circumstances and the learning while doing were a constant. First, as the US Navy had no shallow-water patrol craft in its inventory when Market Time started, it was forced to borrow forty-four 82-foot steel-hulled Water Patrol Boats (WPB) from the Coast Guard. Second, because it expected that the ships, junks, and sampans to be searched would fight back, these had to be armed. Accordingly its 20 mm gun was removed and replaced by a .50-caliber machine gun as well as an 81 mm mortar. Four additional .50-caliber machine guns and ammunition boxes were installed on the main deck.<sup>75</sup> Further adaptations included the installation of extra bunks and refrigerators to increase on-station time.<sup>76</sup> The number of craft was also increased. In November 1966, 84 PCF (Patrol Craft, Fast), built by Swart Seacraft of Burwick from Louisiana were added and in April 1967 five high-endurance cutters (WHECs) were borrowed from the Coast Guard.<sup>77</sup>

The particular conditions of the Mekong Delta and the Rung Sat Special Zone (RSSZ) led the Navy to expand its influence inland (see Appendix G). Each one of these areas consisted of systems of waterways that constituted the main lines of communication for the Viet Cong.<sup>78</sup> Beyond that, the delta was rich in rice and accounted for one fourth of the land of South Vietnam. Moreover, about half of the population lived there. The Navy also concluded that it was on the delta that the Viet Cong had their "greatest strength, control, and

influence.”<sup>79</sup> Task Force 116 (River Patrol Force), code-named “Game Warden,” was established on 18 December 1965 and tasked to “conduct patrols on the inland waterways, to visit and search, and to carry on inshore surveillance in order to enforce curfews and prevent Viet Cong infiltration, movement, and resupply in the delta and the Rung Sat.”<sup>80</sup>

Like Market Time, Game Warden was a good example of the creativity of the riverine sailors. After the arrival of the first PBRs (Patrol Boat, River) to Vietnam in March 1966, it became clear that, despite the modifications in the commercial version incorporated into the manufacturing process, they were not fully prepared for the high temperatures, humidity, sand, salt, and muddy waters of Vietnam. There were almost no replacement parts on hand and an investigation convened by COMNAVFORV (Commander Naval Forces, Vietnam) concluded that the life expectancy of the PBR would be only six months. Due to the improving skills of PBR crewmen and maintenance personnel from the Naval Support Activity, in 1970, the PBRs were still in service and their speed performance had been improved.<sup>81</sup>

Because of the lack of formal doctrine, the force had to rely on trial and error for its development. One of the tactical adaptations was the pairing of patrolling PBRs to achieve mutual protection. The two boats would patrol in open column formation, close enough to allow mutual support but apart enough to avoid becoming a bigger target. As the PBR proved to be reliable, by the end of 1967 some patrols ventured beyond the main rivers into secondary canals and waterways.<sup>82</sup>

Despite Game Warden’s successes in disrupting enemy movements and logistics on the waterways, COMNAVFORV and COMUSMACV (Commander US Military Assistance Command, Vietnam) recognized the need for an amphibious force in the delta, in the lines of the French *dinassauts*, to locate, encircle, and destroy the Viet Cong.<sup>83</sup> As the US Marines were committed in I Corps AO (Area of Operations) in the north, they could not deploy to the Delta. Instead, the US Army 2<sup>nd</sup> Infantry Brigade of the 9<sup>th</sup> Division was chosen as a landing



force.<sup>84</sup> This brigade, together with the Navy part of the force, the Riverine Assault Force (TF 117), would constitute the MRF (Mobile Riverine Force).<sup>85</sup>

The MRF was officially established in September 1966 and initially consisted of two River Assault Groups (composed of assault craft) and a River Support Squadron (ships that served as the Mobile Riverine Base).<sup>86</sup> The landing force would consist of three infantry battalions, an artillery battalion, and additional combat and combat service support assets.<sup>87</sup>

MRF equipment, tactics, and personnel would also evolve in accordance to the experience and would gradually adapt to the specific conditions of the riverine environment. The 52 Armored Troop Carriers (ATC) of each of the two Assault Groups were converted Landing Craft Mechanized (LCM-6). Each Assault Group also had five LCM-6 converted to Command and Communications Boat (CCB), ten converted to act as monitors, 32 converted to Assault Support Patrol Boats, or ASPB (from 1967 onward), and two converted to serve as refuelers.<sup>88</sup> The MRF was supported by several converted WW2-era LST (Landing Ship, Tank) hulls that were used as barracks and support vessels.<sup>89</sup>

The landing of a helicopter on a modified ACT on 4 July 1967 proved a very good solution to evacuate casualties or to allow command personnel to become airborne. Another sign of creativity was the adaptation of a few of these modified ACTs into the world's smallest hospital ships by converting the interior into medical aid stations and equipping some of them with "operating tables, refrigerated blood, and surgeons to handle critical cases."<sup>90</sup>

The Army also adjusted to the riverine conditions with some equipment such as tents, mess facilities, 106mm recoilless rifles, anti-tank wire-guided missiles, and wheeled vehicles being deleted from the force requirements.<sup>91</sup> Because the steep banks and the great tidal range would make the use of the 105 mm artillery howitzer ashore almost impossible, the Army created large barges that would support two howitzers. Each of the barges would be towed by a LCM-8 to the desired location.<sup>92</sup> In June 1968 another River Assault Squadron was added to the MRF and in September of the same year the force would be further expanded by the

addition of a fourth squadron, with the new arriving craft being improved versions of earlier designs.<sup>93</sup>

After assuming command of NAVFORV, on 30 September 1968, Vice Admiral Elmo R. Zumwalt came up with a new strategic concept for the employment of the US Navy in South Vietnam. He first wished to coordinate all naval forces in Vietnam in order to prevent enemy infiltration and to achieve pacification. Then, he wanted to seize the initiative in the RSSZ through military and psychological actions to secure the Long Tau shipping channel to Saigon. Lastly, Zumwalt recommended the development of a plan that would accelerate the turnover of US Navy assets to the Vietnamese.<sup>94</sup>

To accomplish his objectives, TF 194 was defined on 15 October 1968, and SEALORDS (South East Asia Lake, Ocean, River, and Delta Strategy) was put into effect, with Captain Robert S. Salzer, US Navy, former commander of TF 117, being designated "First Sea Lord."<sup>95</sup> Assets from Market Time, Game Warden, and the Mobile Riverine Force were chopped to the First Sea Lord for specific operations.<sup>96</sup> All the task forces continued with their previous missions with additional tasks from the SEALORDS campaign. "While Market Time craft would execute river incursions from the sea, Game Warden forces would perform riverine raiding and blocking operations, and Mobile Riverine Force elements would utilize their ground forces for riverine strike sweeps."<sup>97</sup>

After 1968, US policy was to turn the war over to the Vietnamese, and it was time to accomplish the last of Admiral Zumwalt's objectives. On 2 November 1968, in a meeting with General Creighton Adams, COMUSMACV, Zumwalt estimated that the Navy turnover process would be completed by 30 June 1970.<sup>98</sup> The first step of the Accelerated Turnover to Vietnam (ACTOV) took place on 1 February 1969, when the Riverine Assault Force was dissolved and two VNN River Assault and Interdiction Divisions were formed.<sup>99</sup> By June of that year the turnover of five-sixths of all the operational craft was completed. The process would be concluded by December 1970, and the US Navy would strengthen its blue water commitment against the Soviets.<sup>100</sup>

## **Operation Iraqi Freedom**

On 14 October 2005, Admiral Mike Mullen, CNO (Chief of Naval Operations), issued his Guidance for 2006.<sup>101</sup> He identified the “requirements to organize, train, maintain, and equip a Navy Expeditionary Combat Command (NECC)” and the development of “concepts for green and brown water operations,” in order “to support the joint and combined war on terror” as two of the tasks for 2006.<sup>102</sup> On 13 January 2006 the NECC was established “to serve as the single functional command for the Navy’s expeditionary forces and as central management for the readiness, resources, manning, training and equipping of those forces.”<sup>103</sup> Following this move, on 25 May 2006, the NECC formally established Riverine Group ONE,<sup>104</sup> and the first of its three planned squadrons - Riverine Squadron (RIVRON) 1.<sup>105</sup>

In April 2007, after months of preparation at the Marine Corps School of Infantry and the Special Missions Training Centre, RIVRON 1 assumed what until that moment had been the primary mission of the U.S. Marine Corps’ Small Craft Company, and the Dam Security Unit: the Security of Haditha Dam on Lake Buhayrat al Qadisiyah.<sup>106</sup> Additionally, the Squadrons of Riverine Group ONE have been conducting other riverine operations, such as security patrols, interdiction, surveillance, screening, and denial, along the portion of Euphrates River inside Marine Expeditionary Force (MEF) AO in Al Anbar Province.<sup>107</sup>

The riverine operations in Iraq provide the US Navy a new stage for learning tactics, techniques, and procedures, for the first time since Vietnam. In terms of command relationship, RIVRON 2 was initially under Operational Control (OPCON) of TF 56 (5<sup>th</sup> Fleet), under Tactical Control (TACON) of II MEF, and in Direct Support (DS) of Regimental Combat Team (RCT) 2. As the Navy was also operating outside RCT 2 AO, by March 2008 RIVRON 2 ceased to be in DS to RCT 2, while keeping the same OPCON and TACON command relationship. By January 2008 it was also decided to establish a Liaison Officer at II MEF Head Quarters.<sup>108</sup>

At the tactical level, two main improvements took place. First, a few months after its deployment, RIVRON 2 organic Unmanned Aerial Vehicles (UAV) began to assist

intelligence gathering efforts. Second, RIVRON 2 Standing Operating Procedures (SOP) “were constantly refined and the updated version sent back to the United States for incorporation into RIVRON 3 training.”<sup>109</sup>

In November 2007, of the twelve Small Unit Riverine Crafts, or SURC (see Appendix H), organic to RIVRON 2 (four in each of the three detachments), only four were fully operational. This situation highlighted the need to institute a maintenance cycle for the boats. However, the civilian contractors responsible for the boat maintenance were positioned at Al Asad, a safer position well behind the area where the boats were operating. This situation was inconvenient for two main reasons. First, the driving distances to each of the RIVRON detachments were considerable: about one and a half hours to Haditha Dam and approximately two and a half hours to Al Qa'im and Al Taqaddum (see Appendix I). The second limitation was the fact that the maintenance facilities could not conduct water testing after repairing the boats. On several occasions the *repaired* boats broke down immediately after their return to the Euphrates River. To mitigate the effects of these limitations, the crew gradually learned to repair and to swap engines locally. By March 2008, two months before the end of its deployment, RIVRON 2 finally reached its Full Operational Capability (FOC), with all the boats capable of performing their duties.<sup>110</sup>

## CONCLUSIONS

During the Portuguese colonial wars in Africa, riverine vessels and *fuzileiros* played a decisive role at the military and political levels. For thirteen years they controlled most of the inland waters, projected force and logistic support ashore, cooperated with the other services in the counterinsurgency effort, and, in some occasions, were the only way to establish contact with the population and to expand Portuguese authority in the overseas territories of the *ultramar*. However, it took Portugal more than fourteen years of continuous effort to strengthen and adapt the riverine force to the demands of Portuguese strategy and to oppose successfully the insurgent's initiatives. Portugal started an aggressive naval construction

program about four years prior to the conflict and was able to increase the number of riverine assets 185 percent from 1957 to 1961 and to quintuple the size of its riverine fleet in the next ten years.

The more recent deployments to Zaire (1997), Guinea-Bissau (1998), and Democratic Republic of the Congo (2006), together with the Portuguese National and Naval strategies, suggest that Portugal has the requirement to quickly commit its naval and amphibious forces in support of the Portuguese communities in the world or in the fulfillment of the objectives of the organizations of which it is part. The quick development of the events leading to a crisis and the short notice prior to consequent deployment also support the argument that if situations like these happen in the future, in the same or different areas but in a less permissive environment, there will be no time to establish a tailored riverine force. Portugal and its ability to react will be limited by the force that it has available at the time. Either the mission will not be accomplished or it will be conducted with additional physical risks for the Portuguese Navy. The decision not to commit forces may restrict the physical risks but will certainly not curb the political ones. Allied nations and the Portuguese diaspora may question the Portuguese resoluteness to deploy its Navy or the perception of incoherence between strategy and means may become apparent.

The operations of 1997 and 2006, conducted in an inland water environment away from any support from mother ships, strongly support the argument that the RIBs are not suited for every occasion and that a bigger riverine asset, with some organic fire support capability, is needed. The SURC (see Appendix H) is a good alternative, although a lighter version, capable of transporting a ten men section, would be more appropriate for *fuzileiros* purposes. On the other hand, the 1998 operation in Guinea-Bissau reinforces the need to commission the LPD, a project that Commander Crespo had identified in 1960 as an important force projection asset. The LPD would be able to deploy its organic landing craft into littoral or riverine waters while itself remaining safely distant. Beyond representing a big step in terms of command and control, strategic mobility, and logistic sustainability for the

Portuguese Armed Forces, the LPD would also improve the capability to provide humanitarian support ashore or transport evacuees.

From March 1965 to November 1968, the US Navy and Army on one occasion, established four task oriented riverine forces that conducted the same number of major operations. Independently from the Area of Operations and the task, the bottom line of these initiatives was the continuous strengthening of the riverine capability, and the process of learning and adapting while doing. The US experience in Vietnam also suggests that the difficulty in building a riverine capability is not only a problem for small countries like Portugal, but also for the bigger military and economic powers. Since the first studies in 1964, it took the US four years to develop and adapt its riverine navy to Vietnam.

The extinction of the US riverine fleet after the Vietnam War forced the US navy to rebuild a riverine capability and to relearn how to use it, in order to fight the Global War on Terror in the inland waters of Iraq. One and a half years elapsed between the US Navy decision to develop a riverine capability and the first deployment of RIVRON 1 to Iraq. It may be argued that some of the maintenance limitations and operational adaptations could have been reduced, if the US Navy had maintained its familiarity with the riverine assets and environment. But such a force was not seen as a relevant part of naval strategy, and a “blue water” orientation was more fitting for addressing the Soviet threat.

Portuguese and US past experiences suggest that a riverine capability can not easily and quickly be established according to the immediate operational needs. On the contrary, it should be preserved and practiced, to give the political leadership and the military commanders another tool to accomplish their objectives, in a conventional or unconventional scenario, and to avoid unnecessary risks. Moreover, considering the Portuguese commitment to its alliances and to the Portuguese communities living abroad, it is possible to argue that a riverine capability and the means to project it is as relevant for today’s Portuguese Navy as it was during the period of the African colonial wars.

<sup>1</sup> Charles W. Koburger, Jr., *The French Navy in Indochina: Riverine and Coastal Forces, 1944-54* (New York, NY: Praeger Publishers, 1991), xi.

<sup>2</sup> Luís Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 2 (Lisbon: Comissão Cultural de Marinha – INAPA, 2006), 28, 187; Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 3 (Lisbon: Comissão Cultural de Marinha – INAPA, 2006), 21, 216; Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 4 (Lisbon: Comissão Cultural de Marinha – INAPA, 2006), 27, 193. On 15 March 1961 the UPA (Union of the Populations of Angola) terrorists attacked civilians in São Salvador and Dembos areas in the northern Angola. This attack resulted in the death of several hundred whites and 6000 blacks. On 25 October 1974 was signed the ceasefire agreement between the Portuguese authorities and the MPLA (Popular Movement for the Liberation of Angola). On 31 January 1963, PAIGC (African Party for the Independence of Guinea and Cape Verde) attacked Tite military facilities and on June 22, 1974 the withdrawal of Portuguese Navy from Guinea Bissau started. On August 1964, the first terrorist actions took place in Mozambique, in the districts of Cabo Delgado and Niassa. On 05 September 1974 was signed the ceasefire agreement between the Portuguese authorities and the FRELIMO (Liberation Front of Mozambique).

<sup>3</sup> John P. Cann, *Counterinsurgency in Africa: The Portuguese Way of War, 1961-1974* (London: Greenwood Press, 1997), 3.

<sup>4</sup> John P. Cann, *Brown Waters of Africa: Portuguese Riverine Warfare 1961-1974* (St Petersburg, FL: Hailer Publishing, 2007), 36.

<sup>5</sup> Abílio Ferreira da Cruz Júnior, "Evolução das Infra-estruturas da Armada no Ultramar" [Evolution of Naval Infrastructure in the Ultramar], in the unpublished collection *Participação da Armada na Defesa das Províncias Ultramarinas* [Participation of the Navy in the Defence of the Overseas Provinces], TMs [photocopy] (Lisbon: Ministério da Marinha, 1972), 13; Cann, *Brown Waters of Africa*, 29.

<sup>6</sup> António Emílio Ferraz Sacchetti, "A Armada nas Campanhas de África" [The Navy in the African Campaigns], *Revista da Armada*, May, 1997, 7. The Naval Commands of Angola and Mozambique were established through the *Decreto-Lei nº 41 057* from 8 of April 1957. The Naval Command of the Continent was created through the *Decreto-Lei nº 41 988* from 3 of December 1958. The Naval Command of Cape Verde and Guinea was created through the *Decreto-Lei nº 41 990* from 3 of December 1958.

<sup>7</sup> Cann, *Brown Waters of Africa*, 35.

<sup>8</sup> Ferraz Sacchetti, 6. According to Cann, *Brown Waters of Africa*, this resulted in the development of two navies during the 1960 to 1974 period. One supported by France and Germany committed to Africa and the other supported by the United States and the British focused on NATO.

<sup>9</sup> Cann, *Brown Waters of Africa*, 30.

<sup>10</sup> Raymond Blackman, ed., *Jane's Fighting Ships, 1956-57/1971-72* (New York, NY: McGraw-Hill Book Company). Considering the total of 134 available naval units on 1971 and the total of 1040 NM of inland navigable waters, each naval unit would be responsible for 7.76 NM average. These figures were nearly equivalent to those of the 1969 US Navy in Vietnam, with a ratio of 6.46 nautical miles per naval unit.

<sup>11</sup> Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 1, 19, 20.

<sup>12</sup> Cann, *Brown Waters of Africa*, 52.

<sup>13</sup> Koburger, Jr., 1-9.

<sup>14</sup> Cann, *Brown Waters of Africa*, 55-56; United States Air Force Project RAND, *A Translation from the French: Lessons of the War in Indochina*, Volume 2, trans. Victor Croizat (Santa Monica, CA: RAND Corporation, 1967), 173-189, 348-358.

<sup>15</sup> Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 1, 22.

<sup>16</sup> Ibid., 19-22. The Detachment of Special *Fuzileiros* Number One was created through the *Portaria nº 18 774* from 13 October 1961. The policy for the constitution and employment of the Detachment of Special *Fuzileiros* was approved by *Despacho* dated 19 October 1961.

<sup>17</sup> Ibid., 46-50, 97-99. The *Decreto Lei nº 43 515* from 24 February 1961, created the class of Naval *Fuzileiros* in the Portuguese Navy. Special *Fuzileiros* was one of the specializations for the Naval *Fuzileiros*, which was also available for officers from the Navy (*Marinha*) class appointed to command the units of *Fuzileiros*. The difference in preparation for combat between the two kinds of *Fuzileiros*, dictated the employment of the Naval *Fuzileiros* in the security of naval bases, escorts, and small surveillance and offensive operations. On the other hand, the Special *Fuzileiros* were tasked to conduct offensive operations ashore like raids, special reconnaissance, and sabotages, as well as to patrol and to mount ambushes along the waterways. Further, the Special *Fuzileiros* were expected to conduct amphibious operations with other services, particularly as the first assault wave. Naval *Fuzileiros* were organized in companies of 140 men, while the Special *Fuzileiros* were organized in Detachments of 75 men until 1967, and 80 men from 1967 onwards.

<sup>18</sup> The first mistake was the lack of means available locally at the beginning of the operations. The second had to do with the structure and equipment of the naval units that were normally oriented toward blue water operations and needed to be adapted to riverine conditions. The third was the often conventional employment of the military means that tended to be disproportional to the threat and disaffected the population from the counterinsurgent's cause. Finally, the fourth was the low degree of physical, moral, and military training for the specific conditions of demanding and difficult counterinsurgency warfare.

- <sup>19</sup> Manuel Pereira Crespo, "As Missões das Forças Navais na Guerra Revolucionária" [The Missions of Naval Forces in Revolutionary War], *Anais do Clube Militar Naval* (July-September 1960): 537-550; Cann, *Brown Waters of Africa*, 44-45.
- <sup>20</sup> Pereira Crespo, 537-550.
- <sup>21</sup> Cann, *Brown Waters of Africa*, 46.
- <sup>22</sup> José Alberto Lopes Carvalheira, "Acção da Marinha em Águas Interiores (1961-1971)" [Naval Operations in Inland Waters (1961-1971)], in the unpublished collection *Participação da Armada na Defesa das Províncias Ultramarinas* [Participation of the Navy in the Defence of the Overseas Provinces], TMs [photocopy] (Lisbon: Ministério da Marinha, 1972), I-17.
- <sup>23</sup> Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 2, 108; José Moura da Fonseca, "A Marinha no Leste e no Sueste de Angola," *Anais do Clube Militar Naval* (October – December 1981): 619-629. The Navy established a command structure in Luso and deployed one Detachment of Special *Fuzileiros* to Lungué-Bungo. It also deployed one Detachment of Special *Fuzileiros* and a Small Landing Craft to Chilombo (close to the Luena River), a Small Landing Craft to Chiume, and one Company of Naval *Fuzileiros* and a Small Landing Craft to Vila Nova da Armada.
- <sup>24</sup> Cann, *Brown Waters of Africa*, 200, 201.
- <sup>25</sup> Lopes Carvalheira, II-1, II-5; Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 3, 244-258.
- <sup>26</sup> This Squadron (*Esquadilha de Lanchas do Lago Niassa*) was created by *Portaria n° 21 539* from 17 September 1965.
- <sup>27</sup> Cann, *Brown Waters of Africa*, 176; Baêna, *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*, vol 4, 205, 231-232.
- <sup>28</sup> Portuguese Navy, *Corpo de Fuzileiros* [Marine Corps], <http://fuzileiros.marinha.pt/CFuzileiros/Site/PT/Comando+Corpo+Fuzileiros/Historial/> (accessed February 12, 2009).
- <sup>29</sup> Raymond Blackman, ed., *Jane's Fighting Ships 1972-73* (New York, NY: McGraw-Hill Book Company); John E. Moore, ed., *Jane's Fighting Ships 1973-74* (New York, NY: McGraw-Hill Book Company); John E. Moore, ed., *Jane's Fighting Ships, 1974-75/1976-77* (New York, NY: Franklin Watts, Inc.); Richard Sharp, ed., *Jane's Fighting Ships 1994-95* (Alexandria, VA: Jane's Information Group Inc.); Stephen Saunders, ed., *Jane's Fighting Ships 2007-2008* (Alexandria, VA: Jane's Information Group Inc.).
- <sup>30</sup> John P. Cann, correspondence with the author, 03 February 2009, Charlottesville, VA, USA; Kenneth Maxwell, *The Making of Portuguese Democracy* (Cambridge: Cambridge University Press, 1995), 172-174.
- <sup>31</sup> OCHA, *Strategic Humanitarian Coordination in the Great Lakes Region 1996-1997: An Independent Study for the Inter-Agency Standing Committee*, (United Nations: Office for the Coordination of Humanitarian Affairs, 1997), 6-8, [http://www.reliefweb.int/OCHA\\_OL/pub/greatlak/external.html](http://www.reliefweb.int/OCHA_OL/pub/greatlak/external.html) (accessed January 27, 2009). The French intervention, besides protecting the refugees, also had the consequence of halting the Rwandan Patriotic Front (RPF) and allowing the fleeing Rwandan Army (FAR) to cross the Zairian border without being defeated. The *coup d'état* in Burundi in the summer of 1996, led by Major Pierre Buyoya, resulted in increased number of Hutu refugees into Tanzania and Zaire. At the same time, the ex-FAR were using refugee camps in Eastern Zaire, as political and military bases, and establishing coalitions with local elements of the Zairian Army (FAZ). The conflict on Eastern Zaire and the associated humanitarian crisis prompted the United Nations to pass the UN Security Council Resolution 1078 on 9 November 1996, calling for governments to begin working towards a MNF. On the same day the Canadian government agreed to lead it.
- <sup>32</sup> Ferreira Fernandes and Inácio Ludgero, "Zaire: A Batalha de Kinshasa" [Zaire: The Battle for Kinshasa], *Visão*, May 8, 1997, 44.
- <sup>33</sup> Clemente Gil, "Zaire 1997," *Personal Diary* (Lisbon/Brazzaville: April/May, 1997).
- <sup>34</sup> FORREZ, *Plano de Operações 02/97* [Operations Plan 02/97] (Brazzaville: FORREZ Command Post, 1997), 2.
- <sup>35</sup> The RIB has no organic fire support capability and its transporting capacity is reduced to five (four plus one crew) when carrying a supporting weapon.
- <sup>36</sup> FORREZ, 2.
- <sup>37</sup> Clemente Gil, "Zaire 1997," *Personal Diary*.
- <sup>38</sup> Terhi Lehtinen, "The Military-Civilian Crisis in Guinea-Bissau," *Conflict Transformation Group*, 2000, <http://www.conflicttransform.net/Guinea.pdf> (accessed February 1, 2009).
- <sup>39</sup> Alexandre Reis Rodrigues and Américo Silva Santos, *Bissau em Chamas: Junho de 1998* [Bissau in Flames: June 1998] (Lisbon: Casa das Letras, 2007), 64.
- <sup>40</sup> *Ibid.*, 39, 40.
- <sup>41</sup> *Ibid.*, 92.
- <sup>42</sup> *Ibid.*, 43, 44, 91-94. Because Senegal openly supported president Nino Vieira, it regarded Portugal with distrust as it considered the possibility that Portugal could support Assumane Mané. Politically, Senegal wanted to prove that it was able to deal with the problem in Guinea-Bissau without any external interference. When the first Portuguese troops arrived to Dakar, on the 11<sup>th</sup> of June 1998, all military armament and equipment was left



on board the C-130 as Senegalese authorities allowed them to stay ashore with nothing beyond personal belongings, combat rations, and water.

<sup>43</sup> The naval component of the FORREG was composed by the frigate *N.R.P. Vasco da Gama* commanded by Commander Joaquim Conde Baguinho, corvettes *N.R.P. Honório Barreto* commanded by Lieutenant Commander Aníbal Ramos Borges and *N.R.P. João Coutinho* commanded by Lieutenant Commander Joaquim Louro Alves, the tanker *N.R.P. Bérrio* commanded by Commander João Rodrigues Cancela, one Landing Force (22nd Company of *Fuzileiros* (-) commanded by Lieutenant *Fuzileiro* José Duarte Mendes and reinforced with one Anti-tank platoon, a Reconnaissance Platoon commanded by Lieutenant *Fuzileiro* José Eduardo Pinto Conde, a Mortar Platoon (-) commanded by Lieutenant *Fuzileiro* Clemente Fernandes Gil, and one Group of 24 RIBs commanded by Second Lieutenant *Fuzileiro* Eduardo Fernandes Vaqueiro), one Detachment of *fuzileiros* SOF commanded by Lieutenant *Fuzileiro* Pedro Fernandes Fonseca, one Detachment of Combat Divers commanded by Lieutenant António Loureiro de Sousa, and one medical team, in a total of 533 men.

<sup>44</sup> Reis Rodrigues and Silva Santos, 121, 124.

<sup>45</sup> *Ibid.*, 263.

<sup>46</sup> *Ibid.*, 297.

<sup>47</sup> *Ibid.*, 126, 274.

<sup>48</sup> *Ibid.*, 121.

<sup>49</sup> *Ibid.*, 271.

<sup>50</sup> *Ibid.*, 186.

<sup>51</sup> Nuno Sá Lourenço, "Elite dos Fuzileiros Portugueses parte hoje para o Congo" [Elite of the Portuguese Fuzileiros deploys today to Congo], *Público*, July 14, 2006, <http://ultimahora.publico.clx.pt/noticia.aspx?id=1264051&idCanal=> (accessed February 2, 2009).

<sup>52</sup> Portuguese Navy, "Força de Fuzileiros Regressa do Congo" [Fuzileiros Return from the Congo], *Revista da Armada*, January, 2007, [http://www.marinha.pt/extra/revista/ra\\_jan2007/pag\\_7.html](http://www.marinha.pt/extra/revista/ra_jan2007/pag_7.html) (accessed February 2, 2009); European Union, "EU Supports Transition in Democratic Republic of Congo," *Europa Newsletter*, August 1, 2006, [http://europa.eu/newsletter/archives2006/issue86/index\\_en.htm](http://europa.eu/newsletter/archives2006/issue86/index_en.htm) (accessed February 2, 2009). Beyond the Portuguese, the SOF component had 130 French and 50 Swedish.

<sup>53</sup> Portuguese Navy, "Força de Fuzileiros Regressa do Congo."

<sup>54</sup> Nuno Drago Gonçalves, electronic message to author, November 26, 2008.

<sup>55</sup> Nuno Drago Gonçalves, electronic message to author, January 5, 2009.

<sup>56</sup> Portuguese Government, "Conceito Estratégico de Defesa Nacional" [Strategic Concept of National Defense], *Diário da República I Série B nº16*, January 20, 2003. The EEIN includes the Strategic Area of Permanent National Interest (the National Territory and the space between its components – Continent and Isles, and the maritime and aerial space under Portuguese responsibility) ) and the Strategic Area of Circumstantial National Interest (the Euro Atlantic Space – Europe and the relationship with the US; the relationship with the neighboring states; the Mediterranean Countries; the South Atlantic, especially the relationship with Brazil; Former Portuguese Africa and Timor-Leste; the countries with big Portuguese communities; Countries or regions with strong Portuguese historical and cultural presence; and the countries of origin of the immigrants living in Portugal).

<sup>57</sup> Portuguese Government, "Conceito Estratégico de Defesa Nacional."

<sup>58</sup> Ministério dos Negócios Estrangeiros [Ministry of Foreign Affairs], *População Portuguesa e de Origem Portuguesa Residente no Estrangeiro* [Portuguese Population and from Portuguese Origin Living Abroad] (Lisbon: Divisão de Informação e Documentação, 2002).

<sup>59</sup> CIA, *The 2008 World Factbook* (Washington, DC: Central Intelligence Agency, 2008), <https://www.cia.gov/library/publications/the-world-factbook/> (accessed February 11, 2009).

<sup>60</sup> Ministério dos Negócios Estrangeiros.

<sup>61</sup> CIA, *The 2008 World Factbook*.

<sup>62</sup> Ministério dos Negócios Estrangeiros.

<sup>63</sup> CIA, *The 2008 World Factbook*.

<sup>64</sup> Fund for Peace, *Failed States Index 2008* (Washington, DC: 2008), [http://www.fundforpeace.org/web/index.php?option=com\\_content&task=view&id=99&Itemid=140](http://www.fundforpeace.org/web/index.php?option=com_content&task=view&id=99&Itemid=140) (accessed February 18, 2008).

<sup>65</sup> Portuguese Government, *Programa do XVII Governo Constitucional* [Program of the 17th Portuguese Constitutional Government] (Lisbon: Presidência do Conselho de Ministros, 2005), 158-162, <http://www.portugal.gov.pt/NR/rdonlyres/631A5B3F-5470-4AD7-AE0F-D8324A3AF401/0/ProgramaGovernoXVII.pdf> (accessed December 27, 2008).

<sup>66</sup> Francisco Vidal Abreu, *Directive Number 3/03 (A): Naval Policy* (Lisbon: Estado-Maio da Armada, 2004), 3, 4, 8.

<sup>67</sup> Portuguese Navy, "O Navio Polivalente Logístico e a Mobilidade estratégica" [The LPD and the Strategic Mobility], *Revista da Armada*, March, 2005, [http://www.marinha.pt/extra/revista/ra\\_mar2005/pag\\_8.html](http://www.marinha.pt/extra/revista/ra_mar2005/pag_8.html) (accessed February 20, 2009).

<sup>68</sup> Fernando de Melo Gomes, *Directive Number 001/06: Naval Policy* (Lisbon: Estado-Maio da Armada, 2004), 3, 4.

- <sup>69</sup> The other two being security and authority of the State; and economic, scientific, and cultural developments.
- <sup>70</sup> Navy Staff, *Funções e Missões do Poder Naval Nacional* [Roles and Missions of the National Naval Power] (Lisbon: Estado-Maior da Armada, 2004), 2, 3.
- <sup>71</sup> João Mira Gomes, *Política Europeia de Segurança e Defesa* [European Security and Defence Policy] (Lisbon: Instituto de Estudos Políticos da Universidade Católica Portuguesa, 2007), [http://www.portugal.gov.pt/Portal/PT/Governos/Governos\\_Constitucionais/GC17/Ministerios/MDN/Comunicacao/Intervencoes/20070329\\_MDN\\_Int\\_SEDNAM\\_PESD.htm](http://www.portugal.gov.pt/Portal/PT/Governos/Governos_Constitucionais/GC17/Ministerios/MDN/Comunicacao/Intervencoes/20070329_MDN_Int_SEDNAM_PESD.htm) (accessed December 27, 2008).
- <sup>72</sup> Thomas J. Cutler, *Brown Water, Black Berets* (Annapolis, MD: Naval Institute Press, 1988), 23.
- <sup>73</sup> R.L. Schreadley, "The Naval War in Vietnam," *Vietnam: The Naval Story 1950-1970*, ed. Frank Uhlig Jr. (Annapolis, MD: Naval Institute Press, 1986), 274-307.
- <sup>74</sup> Schreadley, 274-307.
- <sup>75</sup> Cutler, 82.
- <sup>76</sup> Ibid., 83.
- <sup>77</sup> Ibid., 85, 90.
- <sup>78</sup> S.A. Swartrauber, "River Patrol Relearned," *Vietnam: The Naval Story 1950-1970*, ed. Frank Uhlig Jr. (Annapolis, MD: Naval Institute Press, 1986), 365-411.
- <sup>79</sup> Cutler, 139.
- <sup>80</sup> Swartrauber, 365-411.
- <sup>81</sup> Ibid.
- <sup>82</sup> Cutler, 166.
- <sup>83</sup> R. Blake Dunnavent, *Brown Water Warfare: The U.S. Navy in Riverine Warfare and the Emergence of a Tactical Doctrine, 1775-1970* (Gainesville, FL: University Press of Florida, 2003), 116.
- <sup>84</sup> Dunnavent, 117.
- <sup>85</sup> Cutler, 236.
- <sup>86</sup> Ibid., 240.
- <sup>87</sup> William B. Fulton, *Riverine Operations 1966-1969*, (Washington, DC: Department of the Army, 1973), 31.
- <sup>88</sup> Ibid. The LCM-6 was 56 feet long and displaced 66 tons. It was equivalent to the Portuguese LDM (Landing Craft Medium, or *Lancha de Desembarque Média*), which was 50 feet long and capable of displacing 50 tons. According to Cutler, the monitors were the "Battleships" of the riverine fleet. They carried the same weapons as the ATC, but were endowed with a 81 mm naval mortar amidships and a 40 mm cannon mounted in a turret forward. The ASPB was a high speed armoured boat used for waterway interdiction, surveillance, escort, mine-sweeping, and fire support.
- <sup>89</sup> Cutler, 236.
- <sup>90</sup> Ibid., 241.
- <sup>91</sup> Fulton, 31.
- <sup>92</sup> Cutler, 247. The LCM-8 was 74 feet long and a maximum displacement of 113.2 tons.
- <sup>93</sup> Ibid., 250.
- <sup>94</sup> Schreadley, 274-307; Elmo R. Zumwalt, *On Watch* (New York, NY: The New York Times Book Co, 1976), 40.
- <sup>95</sup> Fulton, 180.
- <sup>96</sup> Schreadley, 274-307.
- <sup>97</sup> Dunnavent, 121.
- <sup>98</sup> Cutler, 343, 344.
- <sup>99</sup> Schreadley, 274-307; Cutler, 345. According to Admiral Zumwal's memoir, he personally chose the acronym ACTOV, because it sounded like "active," which was what he wanted the program to be.
- <sup>100</sup> Schreadley, 274-307.
- <sup>101</sup> U.S. Navy, *Meeting the Challenge of a New Era: CNO Releases 2006 Guidance* (Arlington, VA: Chief of Naval Operations Public Affairs, 2005), 1, [http://www.navy.mil/search/display.asp?story\\_id=20574](http://www.navy.mil/search/display.asp?story_id=20574) (accessed January 21, 2009).
- <sup>102</sup> Mike Mullen, *CNO Guidance for 2006: Meeting the Challenges of a New Era* (Washington, DC: Office of the Chief of Naval Operations, 2006), 5, <http://www.navy.mil/features/2006CNOG.pdf> (accessed January 21, 2009).
- <sup>103</sup> U.S. Navy, *Navy Expeditionary Combat Command Fact Sheet* (Norfolk, VA: NECC Public Affairs Office, 2006), 1, [http://www.navy.mil/navco/speakers/currents/NECC\\_Fact\\_Sheets.pdf](http://www.navy.mil/navco/speakers/currents/NECC_Fact_Sheets.pdf) (accessed January 21, 2009).
- <sup>104</sup> U.S. Navy, *Navy Establishes First Riverine Group* (2006), 1, [http://www.news.navy.mil/search/display.asp?story\\_id=23854](http://www.news.navy.mil/search/display.asp?story_id=23854) (accessed January 21, 2009).
- <sup>105</sup> Grace Jean, "Riverines rehearse for first mission in Iraq," *National Defense Magazine*, April, 2007, <http://www.nationaldefensemagazine.org/archive/2007/April/Pages/Riverinesrehearse2672.aspx> (accessed January 21, 2009).
- <sup>106</sup> Ibid. Lake Buhayrat al Qadisiyah is an artificial lake on Euphrates Rives, created after the construction of Haditha Dam. According to Marine Corps Center for Lessons Learned, May 2006 Newsletter, the Marine Corps Small Craft Company was deactivated on September 2005, being replaced by the Marine Corps Dam Security

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Unit. The Marine Corps Dam Security Unit was composed of more than 95% reservists from Bravo Company, 4<sup>th</sup> Light Armored Reconnaissance Battalion. According to Capt. Chris Devine, Leatherneck News, June 2006, the Dam Security Unit was officially mobilized on 31 May 2006. After a training period at Camp Lejeune initiated in June 2006, the Dam Security Unit deployed to Iraq in the second half of 2006.

<sup>107</sup> Bryan Hudson, interview with the author (Quantico, VA: Command and Staff College, January 25, 2009).

Lieutenant Commander Hudson was Operations Officer for the RIVRON 2 during its deployment to Iraq from September 2007 to May 2008. Presently he is attending Command and Staff College at the Marine Corps University, Quantico, VA. Since April 2007 Riverine Squadrons 1, 2, and 3 have been deployed to Al Anbar Province, Iraq, in shifts of seven months. RIVRON 1 is currently on its second deployment.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid.

<sup>110</sup> Ibid.

## BIBLIOGRAPHY

### Primary sources

- Cann, John P. Correspondence with the author. 03 February 2009, Charlottesville, VA.
- Cruz Júnior, Abílio Ferreira da. "Evolução das Infra-estruturas da Armada no Ultramar." [Evolution of Naval Infrastructure in the *Ultramar*]. In the unpublished collection *Participação da Armada na Defesa das Províncias Ultramarinas*. [Participation of the Navy in the Defense of the Overseas Provinces]. TMs [photocopy]. Lisbon: Ministério da Marinha, 1972.
- Drago Gonçalves, Nuno. E-mail message to author. November 26, 2008.
- Drago Gonçalves, Nuno. E-mail message to author. January 5, 2009.
- Fernandes Gil, Clemente. "Zaire 1997," *Personal Diary*. Lisbon/Brazzaville: April/May, 1997.
- FORREZ. *Plano de Operações 02/97* [Operations Plan 02/97]. Brazzaville: FORREZ Command Post, 1997.
- Hudson, Bryan. Interview with the author. 25 January 2009, Command and Staff College, Quantico, VA.
- Lopes Carvalheira, José Alberto. "Acção da Marinha em Águas Interiores (1961-1971)." [Naval Operations in Inland Waters (1961-1971)]. In the unpublished collection *Participação da Armada na Defesa das Províncias Ultramarinas*. [Participation of the Navy in the Defence of the Overseas Provinces]. TMs [photocopy]. Lisbon: Ministério da Marinha, 1972.

### Secondary sources

- Baêna, Luís Sanches de. *Fuzileiros: Factos e Feitos na Guerra de África, 1961/1974*. [Marines: Deeds and Feats in the African War, 1961/1974]. 4 vols. Lisbon: Comissão Cultural de Marinha – INAPA, 2006.
- Blackman, Raymond, ed. *Jane's Fighting Ships, 1956-57/1972-73*. New York, NY.: McGraw-Hill Book Company.
- Cann, John P. *Brown Waters of Africa: Portuguese Riverine Warfare 1961-1974*. St Petersburg, FL: Hailer Publishing, 2007.
- Cann, John P. *Counterinsurgency in Africa: The Portuguese Way of War, 1961-1974*. London: Greenwood Press, 1997.
- CIA. *The 2008 World Factbook*. Washington, DC: Central Intelligence Agency, 2008. <https://www.cia.gov/library/publications/the-world-factbook/> (accessed February 11, 2009).
- Cutler, Thomas J. *Brown Water, Black Berets*. Annapolis, MD: Naval Institute Press, 1988.
- Dunnavent, R. Blake. *Brown Water Warfare: The U.S. Navy in Riverine Warfare and the Emergence of a Tactical Doctrine, 1775-1970*. Gainesville, FL.: University Press of Florida, 2003.
- European Union. "EU Supports Transition in Democratic Republic of Congo." *Europa Newsletter*, August 1, 2006. [http://europa.eu/newsletter/archives2006/issue86/index\\_en.htm](http://europa.eu/newsletter/archives2006/issue86/index_en.htm) (accessed February 2, 2009).
- Ferreira Fernandes and Inácio Ludgero. "Zaire: A Batalha de Kinshasa" [Zaire: The Battle for Kinshasa]. *Visão*, May, 8, 1997, 36-45.
- Ferraz Sacchetti, António Emílio. "A Armada nas Campanhas de África" [The Navy in the African Campaigns], *Revista da Armada*, May, 1997, 6-7.

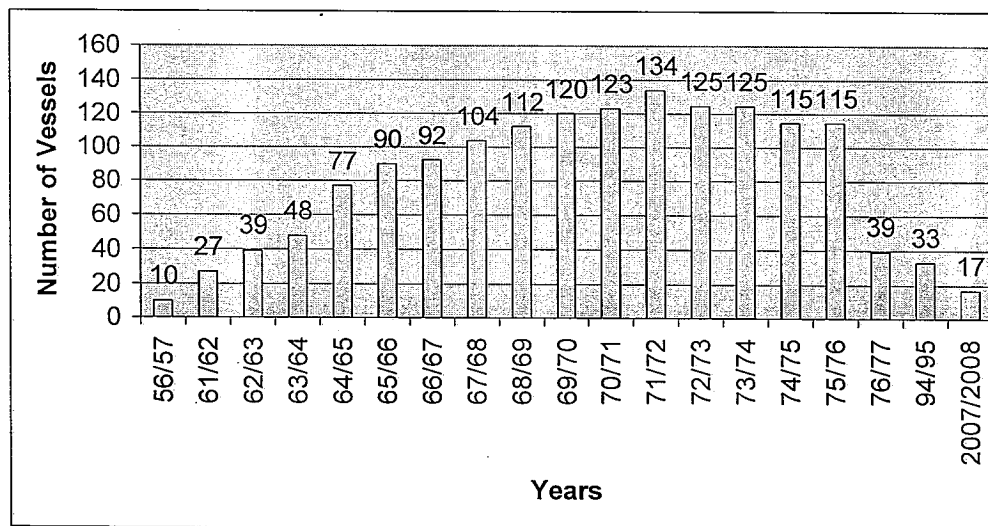
- Fulton, William B. *Riverine Operations 1966-1969*. Washington, DC: Department of the Army, 1973.
- Fund for Peace. *Failed States Index 2008* (Washington, DC: 2008).  
[http://www.fundforpeace.org/web/index.php?option=com\\_content&task=view&id=99&Itemid=140](http://www.fundforpeace.org/web/index.php?option=com_content&task=view&id=99&Itemid=140) (accessed February 18, 2008).
- Jean, Grace. "Riverines rehearse for first mission in Iraq." *National Defense Magazine*, April, 2007. <http://www.nationaldefensemagazine.org/archive/2007/April/Pages/Riverinesrehearse2672.aspx> (accessed January 21, 2009).
- Koburger, Charles W. *The French Navy in Indochina: Riverine and Coastal Forces, 1944-54*. New York, NY: Praeger Publishers, 1991.
- Lehtinen, Terhi. "The Military-Civilian Crisis in Guinea-Bissau." *Conflict Transformation Group*, 2000. <http://www.conflicttransform.net/Guinea.pdf> (accessed February 1, 2009).
- Maxwell, Kenneth. *The Making of Portuguese Democracy*. Cambridge: Cambridge University Press, 1995.
- Melo Gomes, Fernando. *Directive Number 001/06: Naval Policy*. Lisbon: Estado-Maior da Armada, 2006.
- Ministério dos Negócios Estrangeiros [Ministry of Foreign Affairs]. *População Portuguesa e de Origem Portuguesa Residente no Estrangeiro* [Portuguese Population and from Portuguese Origin Living Abroad]. Lisbon: MNE – Divisão de Informação e Documentação, 2002.
- Mira Gomes, João. *Política Europeia de Segurança e Defesa* [European Security and Defence Policy] (Lisbon: Instituto de Estudos Políticos da Universidade Católica Portuguesa, 2007), [http://www.portugal.gov.pt/Portal/PT/Governos/Governos\\_Constitucionais/GC17/Ministerios/MDN/Comunicacao/Intervencoes/20070329\\_MDN\\_Int\\_SEDNAM\\_PESD.htm](http://www.portugal.gov.pt/Portal/PT/Governos/Governos_Constitucionais/GC17/Ministerios/MDN/Comunicacao/Intervencoes/20070329_MDN_Int_SEDNAM_PESD.htm) (accessed December 2008).
- Moore, John E., ed. *Jane's Fighting Ships 1973-74*. New York, NY: McGraw-Hill Book Company.
- Moore, John E., ed. *Jane's Fighting Ships, 1974-75/1976-77*. New York, NY: Franklin Watts, Inc.
- Moura da Fonseca, José da Cruz. "A Marinha no Leste e no Sueste de Angola." [The Navy in the East and Southeast of Angola]. *Anais do Clube Militar Naval (October – December 1981)*: 619-629.
- Mullen, Mike. *CNO Guidance for 2006: Meeting the Challenges of a New Era*. Washington, DC.: Office of the Chief of Naval Operations, 2006. <http://www.navy.mil/features/2006CNOG.pdf> (accessed January 21, 2009).
- Navy Staff, *Funções e Missões do Poder Naval Nacional* [Roles and Missions of the National Naval Power]. Lisbon: Estado-Maior da Armada, 2004.
- OCHA. *Strategic Humanitarian Coordination in the Great Lakes Region 1996-1997: An Independent Study for the Inter-Agency Standing Committee*. United Nations: Office for the Coordination of Humanitarian Affairs, 1997. [http://www.reliefweb.int/OCHA\\_OL/pub/greatlak/external.html](http://www.reliefweb.int/OCHA_OL/pub/greatlak/external.html) (accessed January, 27, 2009).
- Pereira Crespo, Manuel. "As Missões das Forças Navais na Guerra Revolucionária." [The Missions of Naval Forces in Revolutionary War]. *Anais do Clube Militar Naval (July-September 1960)*: 537-550.
- Portuguese Government. "Conceito Estratégico de Defesa Nacional." [Strategic Concept of National Defense] *Diário da República I Série B nº16*, January 20, 2003.
- Portuguese Government. *Programa do XVII Governo Constitucional*. [Program of the 17th Portuguese Constitutional Government]. Lisbon: Presidência do Conselho de Ministros, 2005. <http://www.portugal.gov.pt/NR/rdonlyres/631A5B3F-5470-4AD7-AE0F-D8324A3AF401/0/ProgramaGovernoXVII.pdf> (accessed December 2008).

- Portuguese Navy. *Corpo de Fuzileiros* [Marine Corps]. <http://fuzileiros.marinha.pt/CFuzileiros/Site/PT/Comando+Corpo+Fuzileiros/Historial/> (accessed February 12, 2009).
- Portuguese Navy. "Força de Fuzileiros Regressa do Congo" [Fuzileiros Return from the Congo]. *Revista da Armada*, January, 2007. [http://www.marinha.pt/extra/revista/ra\\_jan2007/pag\\_7.html](http://www.marinha.pt/extra/revista/ra_jan2007/pag_7.html) (accessed February 2, 2009).
- Portuguese Navy. "O Navio Polivalente Logístico e a Mobilidade estratégica" [The LPD and the Strategic Mobility]. *Revista da Armada*, March, 2005. [http://www.marinha.pt/extra/revista/ra\\_mar2005/pag\\_8.html](http://www.marinha.pt/extra/revista/ra_mar2005/pag_8.html) (accessed February 20, 2009).
- Reis Rodrigues, Alexandre and Américo Silva Santos. *Bissau em Chamas: Junho 1998* [Bissau in Flames: June 1998]. Lisbon: Casa das Letras, 2007.
- Sá Lourenço, Nuno. "Elite dos Fuzileiros Portugueses parte hoje para o Congo" [Elite of the Portuguese Fuzileiros deploys today to Congo]. *Público*, July 14, 2006. <http://ultimahora.publico.clx.pt/noticia.aspx?id=1264051&idCanal=> (accessed February 2, 2009).
- Saunders, Stephen, ed. *Jane's Fighting Ships 2007-2008*. Alexandria, VA: Jane's Information Group Inc.
- Schreadley, R.L. "The Naval War in Vietnam." In *Vietnam: The Naval Story 1950-1970*, edited by Frank Uhlig Jr., 274-307. Annapolis, MD: Naval Institute Press, 1986.
- Sharp, Richard, ed. *Jane's Fighting Ships 1994-95*. Alexandria, VA: Jane's Information Group Inc.
- Swarztrauber, S.A. "River Patrol Relearned." In *Vietnam: The Naval Story 1950-1970*, edited by Frank Uhlig Jr., 365-411. Annapolis, MD: Naval Institute Press, 1986.
- U. S. Air Force Project RAND. *A Translation from the French: Lessons of the War in Indochina*, Volume 2. Translated by Victor Croizat. Santa Monica, CA: RAND Corporation, 1967.
- U.S. Navy. *Meeting the Challenge of a New Era; CNO Releases 2006 Guidance*. Arlington, VA: Chief of Naval Operations Public Affairs, 2005. [http://www.navy.mil/search/display.asp?story\\_id=20574](http://www.navy.mil/search/display.asp?story_id=20574) (accessed January 21, 2009).
- U.S. Navy. *Navy Establishes First Riverine Group*. 2006. [http://www.news.navy.mil/search/display.asp?story\\_id=23854](http://www.news.navy.mil/search/display.asp?story_id=23854) (accessed January 21, 2009).
- U.S. Navy. *Navy Expeditionary Combat Command Fact Sheet*. Norfolk, VA: NECC Public Affairs Office, 2006. [http://www.navy.mil/navco/speakers/currents/NECC\\_Fact\\_Sheets.pdf](http://www.navy.mil/navco/speakers/currents/NECC_Fact_Sheets.pdf) (accessed January 21, 2009).
- Vidal Abreu, Francisco. *Directive Number 3/03 (A): Naval Policy*. Lisbon: Estado-Maio da Armada, 2004.
- Zumwalt, Elmo R. *On Watch*. New York, NY: The New York Times Book Co, 1976.

## APPENDIX A

### Evolution of the Portuguese Riverine Fleet

Vessels	Years																		
	56/57	61/62	62/63	63/64	64/65	65/66	66/67	67/68	68/69	69/70	70/71	71/72	72/73	73/74	74/75	75/76	76/77	94/95	2007/2008
Patrol Vessels	10	15	15	15	15	15	15	14	22	21	18	16	15	15	15	14	10	10	4
Patrol Launches		12	21	28	29	30	30	35	35	39	40	39	36	36	36	37	16	14	12
LCT (LDG)					4	4	4	4	4	5	6	6	6	6	6	6	4	3	1
LCM (LDM)					20	27	26	29	29	29	35	50	46	46	36	36	9	6	
LCA (LDP)			3	5	9	14	17	22	22	26	24	23	22	22	22	22			
<b>Total</b>	<b>10</b>	<b>27</b>	<b>39</b>	<b>48</b>	<b>77</b>	<b>90</b>	<b>92</b>	<b>104</b>	<b>112</b>	<b>120</b>	<b>123</b>	<b>134</b>	<b>125</b>	<b>125</b>	<b>115</b>	<b>115</b>	<b>39</b>	<b>33</b>	<b>17</b>



## APPENDIX B

### History of the Portuguese *Fuzileiros*

The Portuguese Marines (*Fuzileiros*) have their origin in the oldest permanent military unit of Portugal, the Terço of the *Armada* of the Crown of Portugal (*Terço da Armada da Coroa de Portugal*), created in 1621. It must be noted, however, that since 1585 specialized troops existed to provide artillery and riflemen in the Portuguese warships. The *Terço* of the *Armada* was considered an elite unit, being also responsible for the bodyguard of the King of Portugal.

At the end of 18th century, in the reign of Queen Maria I, the force was reorganized into a new Royal Brigade of the Navy, which included two regiments of infantry and one artillery unit. In 1808, when Napoleon occupied Portugal, the Royal Family moved to the Portuguese colony of Brazil, accompanied by the majority of the Royal Brigade of the Navy. This resulted in the creation of the Marine Corps of Brazil (*Corpo de Fuzileiros Navais*).

In the middle of the 19<sup>th</sup> Century, the Royal Brigade of the Navy was extinguished and the landing forces of the navy were organized from within the crew, after receiving infantry training to conduct amphibious operations.

The naval infantry would regain its permanent status in 1961 with the beginning of the Colonial War. The Detachments of Special *Fuzileiros* (*Destacamentos de Fuzileiros Especiais*), tasked to conduct combat operations, and the Companies of Naval *Fuzileiros* (*Companhias de Fuzileiros Navais*), tasked to provide security to naval facilities were created. Until the end of the colonial war in 1975, more than 12,000 marines fought in Guinea-Bissau, Angola and Mozambique.

In 1975, a unified Marine Corps Command (*Comando do Corpo de Fuzileiros*) was established under the dependence of the Navy Chief of Staff, responsible for the preparation, training, and readiness of the units of *Fuzileiros*. In 1993 (*Decreto Lei 49/93*) the *Comando do Corpo de Fuzileiros* integrated the operational structure of the Portuguese Navy under the dependency of the Chief of Naval Operations.

The *Comando do Corpo de Fuzileiros* is composed of two major units - the School of *Fuzileiros* and the Base of *Fuzileiros* and seven operational units: Battalion of *Fuzileiros* number ONE, Battalion of *Fuzileiros* number TWO, Amphibious Landing Unit, Naval Police Unit, Fire Support Company, Tactical Land Transportation Company, and Special Actions Detachment.

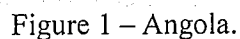
In recognition for its services, the *Comando do Corpo de Fuzileiros* was awarded the highest national decorations, such as: Military Order of the *Torre e Espada*; three Collective War Crosses; two Distinguished Services Gold Medals; *D. Henrique* Order; Freedom Order; and *Tamandaré* Order Medal.

Today's Portuguese *Fuzileiros* are serving in the Military Cooperation in Africa, and since 1997, they have been deployed to Bosnia-Herzegovina, Timor-Leste, Zaire, Guinea-Bissau, Mozambique, Democratic Republic of the Congo, and Afghanistan, alone or as part of Joint or/and Combined Forces.

Source: Portuguese Navy. *Corpo de Fuzileiros* [Marine Corps]. <http://fuzileiros.marinha.pt/CFuzileiros/Site/PT/Comando+Corpo+Fuzileiros/Historial/> (accessed February 12, 2009).



### Maps of Angola, Guinea-Bissau, and Mozambique



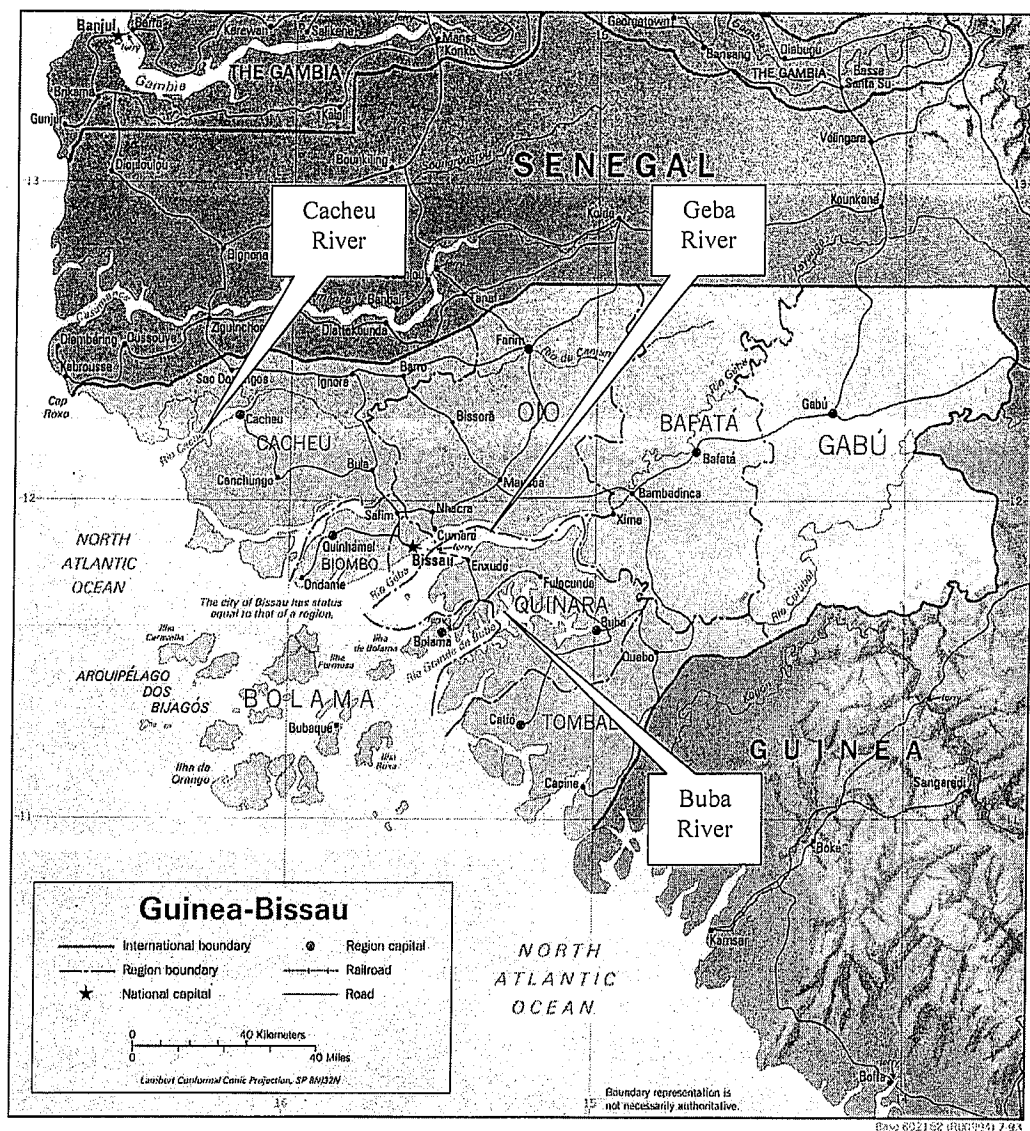


Figure 2 – Guinea-Bissau.

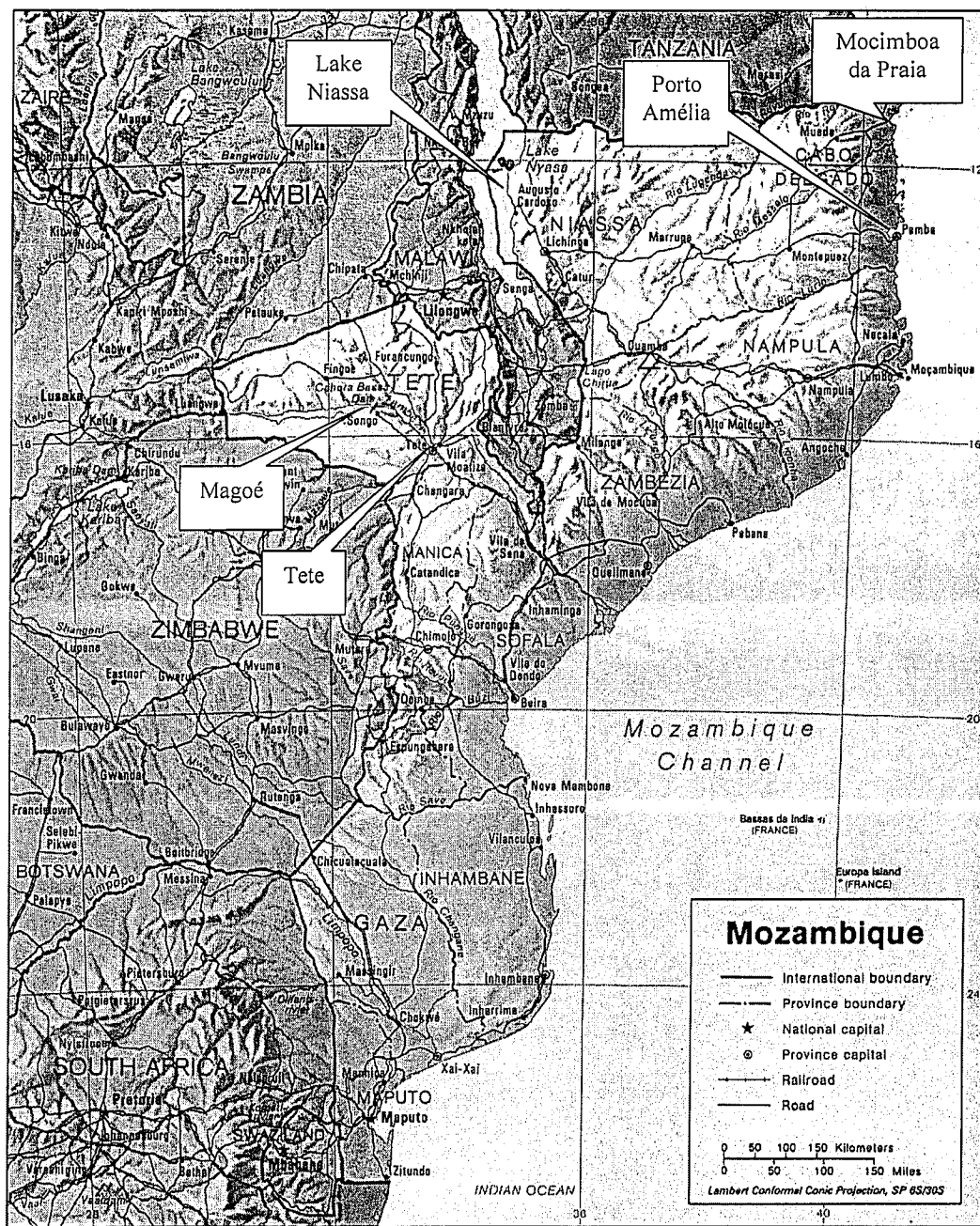
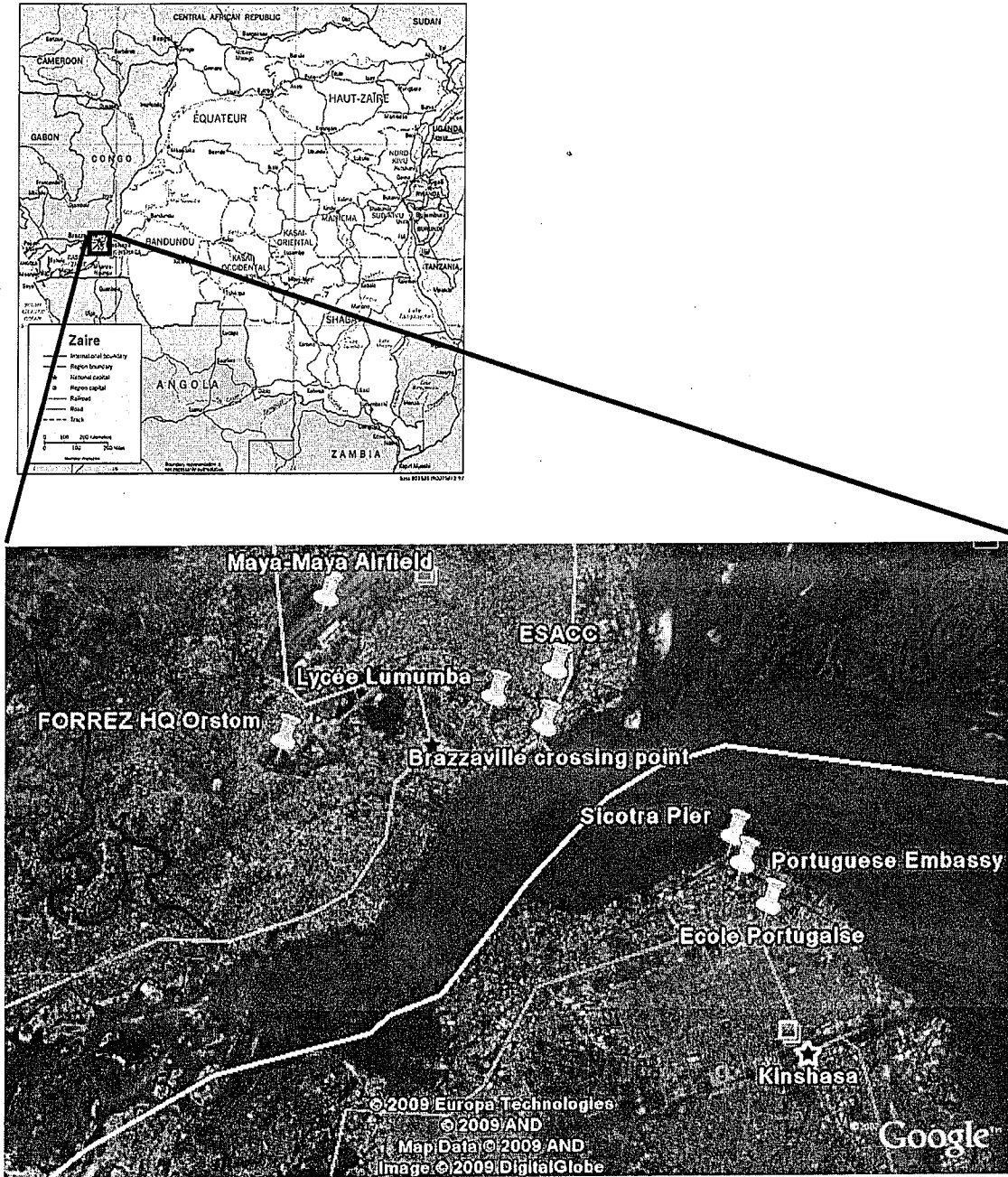


Figure 3 – Mozambique.

## APPENDIX D

### FORREZ Area of Operations

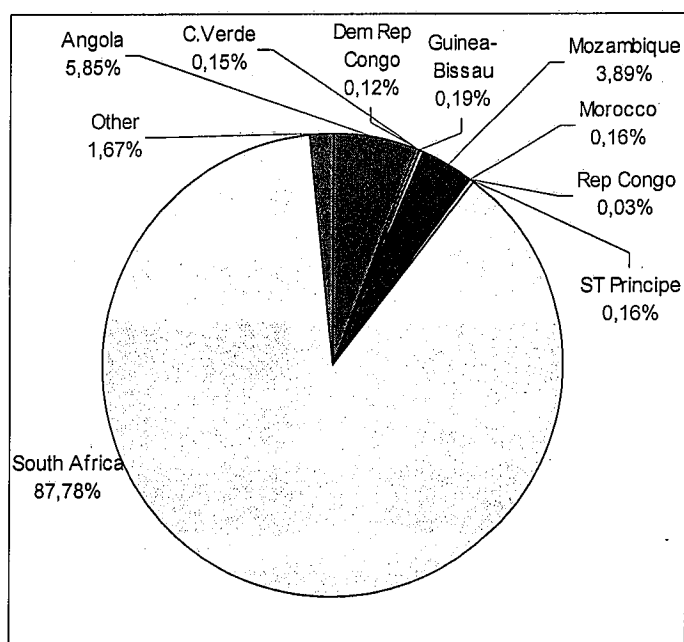


## APPENDIX E

### Portuguese Communities in the World (April 2002)

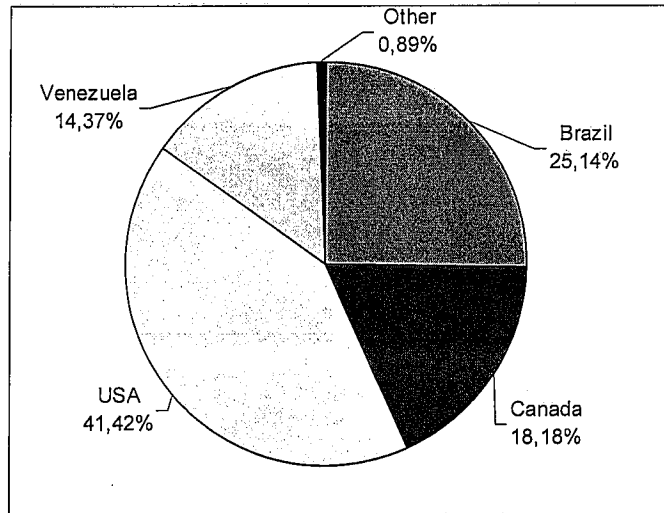
#### Africa

Country	Portuguese
Algeria	20
Angola	20 000
Benin	3
Botswana	32
Burkina Faso	4
Burundi	8
Cape-Verde	500
Central African Republic	40
Cote d'Ivoire	48
Democratic Rep of the Congo	400
Egypt	22
Equatorial Guinea	1
Gabon	17
Gambia	8
Ghana	4
Guinea	5
Guinea-Bissau	665
Islands of Mauritius	25
Kenia	497
Lesotho	200
Liberia	1
Malawi	262
Mali	8
Mauritania	5
Mozambique	13 299
Morocco	549
Namibia	794
Niger	6
Nigeria	65
Republic of Congo	111
S.T. Principe	532
Senegal	180
South Africa	300 000
Sudan	3
Swaziland	884
Tanzania	1
Tunisia	15
Zambia	64
Zimbabwe	2 500
<b>TOTAL</b>	<b>341 778</b>



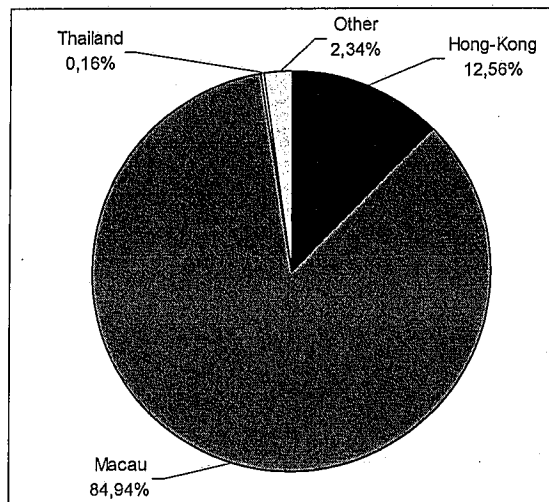
## Americas

Country	Portuguese
Antigua and Barbados	25
Argentina	16 000
Aruba	500
Barbados	90
Bermuda	2 500
Bolivia	40
Brazil	700 000
Canada	506 270
Chile	112
Colombia	70
Cuba	14
Dominica	15
Dominican Republic	40
Equator	267
Grenada	15
Guiana	20
Jamaica	75
Martinique	25
Mexico	300
Montserrat	10
Nederland's Antilles	2 540
Nicaragua	16
Panama	500
Peru	95
Porto Rico	200
St. Kitts	25
St. Lucia	20
St. Vicente	12
Trinidad and Tobago	50
Uruguay	1 200
USA	1 153 351
Venezuela	400 000
<b>TOTAL</b>	<b>2 784 397</b>



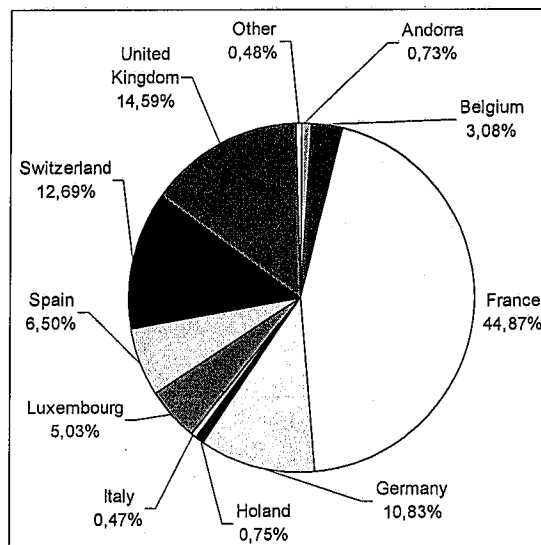
## Asia

Country	Portuguese
Bahrain	63
Bangladesh	1
China	41
Hong-Kong	20 700
India	2 392
Iran	27
Israel	250
Japan	400
Jordan	4
Kuwait	15
Macau	140 000
Malaysia	10
Oman	36
Pakistan	50
Philippines	9
Saudi Arabia	185
Singapore	76
South Korea	11
Sri Lanka	5
Syria	2
Thailand	260
Turkey	14
United Arab Emirates	268
<b>TOTAL</b>	<b>164 819</b>



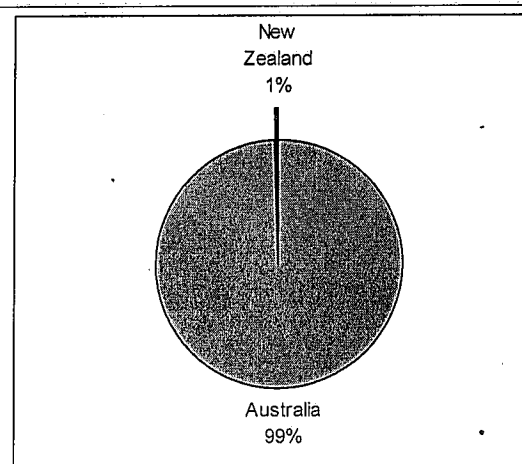
## Europe

EUROPE	Number
Andorra	9 000
Austria	500
Belgium	38 000
Bulgaria	20
Cyprus	41
Czech Republic	30
Denmark	272
Finland	157
Former Yugoslavia	20
France	553 663
Germany	133 700
Greece	300
Holland	9 220
Hungary	44
Iceland	13
Ireland	94
Italy	5 741
Liechtenstein	524
Luxembourg	62 020
Monaco	1 000
Norway	675
Poland	164
Romania	123
Russia	177
Slovakia	5
Spain	80 153
Sweden	1 800
Switzerland	156 542
United Kingdom	180 000
<b>TOTAL</b>	<b>1 233 998</b>



## Oceania

Copuntry	Portuguese
Australia	31 490
New Zealand	200
<b>TOTAL</b>	<b>31 690</b>



**TOTAL GENERAL**

**4 556 682**

Source: Ministério dos Negócios Estrangeiros. *População Portuguesa e de Origem Portuguesa Residente no Estrangeiro*. Lisbon: Divisão de Informação e Documentação, 2002.



## APPENDIX F

### Failed States Index 2008

#### Social Indicators

- I-1. Mounting Demographic Pressures
- I-2. Massive Movement of Refugees or Internally Displaced Persons creating Complex Humanitarian Emergencies
- I-3. Legacy of Vengeance-Seeking Group Grievance or Group Paranoia
- I-4. Chronic and Sustained Human Flight

#### Economic Indicators

- I-5. Uneven Economic Development along Group Lines
- I-6. Sharp and/or Severe Economic Decline

#### Political Indicators

- I-7. Criminalization and/or Delegitimization of the State
- I-8. Progressive Deterioration of Public Services
- I-9. Suspension or Arbitrary Application of the Rule of Law and Widespread Violation of Human Rights
- I-10. Security Apparatus Operates as a "State Within a State"
- I-11. Rise of Factionalized Elites
- I-12. Intervention of Other States or External Political Actors

Rank	Country	I-1	I-2	I-3	I-4	I-5	I-6	I-7	I-8	I-9	I-10	I-11	I-12	Total
1	Somalia	9.8	9.8	9.5	8.3	7.5	9.4	10.0	10.0	9.9	10.0	10.0	10.0	114.2
2	Sudan	9.0	9.6	10.0	8.8	9.3	7.3	10.0	9.5	9.9	9.8	9.9	9.9	113.0
3	Zimbabwe	9.7	9.0	9.5	10.0	9.6	10.0	9.5	9.6	9.8	9.5	9.3	7.0	112.5
4	Chad	9.1	9.2	9.7	7.8	9.1	8.3	9.7	9.4	9.5	9.8	9.8	9.5	110.9
5	Iraq	9.0	9.0	9.8	9.3	8.5	7.8	9.4	8.5	9.6	9.9	9.8	10.0	110.6
6	D. R. Congo	9.6	9.2	8.8	7.9	9.0	8.3	8.3	9.1	8.9	9.6	8.6	9.4	106.7
7	Afghanistan	9.1	8.9	9.5	7.0	8.1	8.5	9.2	8.3	8.4	9.6	8.8	10.0	105.4
8	Cote d'Ivoire	8.4	8.3	9.5	8.4	8.0	8.5	8.9	7.8	9.0	9.2	8.9	9.7	104.6
9	Pakistan	8.0	8.6	9.5	8.1	8.8	6.2	9.5	7.1	9.5	9.6	9.8	9.1	103.8
10	Central African Republic	9.0	8.8	8.9	5.5	8.8	8.4	9.2	8.6	8.7	9.4	9.4	9.0	103.7
11	Guinea	7.9	7.4	8.5	8.3	8.6	8.6	9.7	9.0	8.9	8.4	8.6	7.9	101.8
12	Bangladesh	9.8	7.1	9.7	8.4	9.0	7.1	9.1	7.8	8.0	8.3	9.6	6.4	100.3
12	Burma	8.5	8.5	9.5	6.0	9.0	7.6	9.5	8.3	9.9	9.3	8.7	5.5	100.3
14	Haiti	8.5	4.2	8.0	8.0	8.2	8.3	9.0	8.8	8.9	8.9	8.9	9.6	99.3
15	North Korea	8.2	6.0	7.2	5.0	8.8	9.6	9.8	9.6	9.7	8.3	7.6	7.9	97.7
16	Ethiopia	8.9	7.5	7.8	7.5	8.6	8.2	7.9	7.5	8.5	7.5	8.9	7.3	96.1

16	Uganda	8.7	9.3	8.3	6.0	8.5	7.6	8.3	7.9	7.9	8.1	7.8	7.7	96.1
18	Lebanon	7.2	9.0	9.4	7.1	7.4	6.3	8.0	6.7	7.0	9.3	9.4	8.9	95.7
18	Nigeria	8.2	5.1	9.4	8.2	9.2	5.9	8.9	8.7	7.5	9.2	9.3	6.1	95.7
20	Sri Lanka	7.0	9.0	9.8	6.9	8.2	6.0	9.2	6.6	8.0	9.3	9.5	6.1	95.6
21	Yemen	8.6	7.2	7.3	7.2	8.8	8.2	8.0	8.3	7.5	8.2	8.9	7.2	95.4
22	Niger	9.5	6.0	9.2	6.0	7.2	9.2	8.4	9.1	7.9	7.5	6.7	7.8	94.5
23	Nepal	8.1	5.5	9.0	6.1	9.2	8.2	8.3	7.0	8.8	8.5	8.3	7.2	94.2
24	Burundi	9.1	8.2	6.7	6.5	8.8	8.0	7.1	9.0	7.5	6.8	7.8	8.6	94.1
25	Timor-Leste	8.1	8.6	7.1	5.3	6.5	8.2	9.0	8.0	6.9	8.8	8.5	8.8	93.8
26	Kenya	8.7	8.5	7.6	8.0	8.1	6.9	8.2	7.4	7.2	7.1	8.4	7.3	93.4
26	Republic of the Congo	8.7	7.7	6.8	6.1	8.1	8.0	8.8	8.8	7.9	7.9	7.2	7.4	93.4
26	Uzbekistan	7.7	5.4	7.1	7.1	8.6	7.7	9.3	6.8	9.2	9.0	9.2	6.3	93.4
29	Malawi	9.0	6.2	6.0	8.2	8.8	9.1	8.0	9.0	7.8	5.4	7.6	7.8	92.9
30	Solomon Islands	8.7	4.8	8.0	5.1	8.0	8.0	8.7	8.5	7.1	7.7	8.8	9.0	92.4
31	Sierra Leone	8.6	7.4	6.9	8.4	8.2	8.7	7.7	8.2	7.0	6.4	7.5	7.3	92.3
32	Guinea Bissau	8.0	6.5	5.4	7.0	8.6	8.2	7.9	8.5	8.0	8.4	7.1	7.7	91.3
33	Cameroon	7.4	7.1	7.1	7.9	8.7	6.1	8.7	7.6	7.4	7.8	8.2	7.2	91.2
34	Liberia	8.1	8.4	6.0	6.5	8.3	8.3	7.0	8.5	6.7	6.7	7.9	8.6	91.0
35	Syria	6.5	9.0	8.0	6.8	8.1	6.8	8.8	5.7	8.8	7.6	7.7	6.3	90.1
36	Burkina Faso	8.6	5.6	6.4	6.6	8.9	8.1	7.6	8.9	6.6	7.6	7.7	7.3	89.9
37	Colombia	6.8	9.2	7.4	8.4	8.4	3.8	7.9	6.0	7.2	8.0	8.3	7.6	89.0
38	Tajikistan	7.9	6.1	6.5	6.4	7.3	7.0	9.2	7.1	8.8	7.8	8.6	6.2	88.9
39	Kyrgyzstan	7.5	5.8	6.8	7.4	8.0	7.5	8.4	6.5	7.9	8.1	7.5	7.4	88.8
40	Egypt	7.5	6.3	7.7	6.2	7.8	6.9	9.0	6.3	8.5	6.1	8.4	8.0	88.7
40	Laos	8.0	5.7	6.8	6.6	5.7	7.1	8.2	8.0	8.9	8.2	8.6	6.9	88.7
42	Equatorial Guinea	7.8	2.0	7.0	7.4	9.2	3.9	9.4	8.3	9.5	9.0	8.5	6.0	88.0
42	Rwanda	9.1	7.0	8.5	7.5	7.4	7.3	8.2	6.8	7.3	4.6	7.8	6.5	88.0
44	Eritrea	8.6	7.1	5.6	6.0	5.9	8.5	8.4	7.9	7.4	7.5	7.2	7.3	87.4
45	Togo	7.7	5.6	6.0	6.5	7.5	8.2	7.2	8.0	7.9	7.8	7.5	6.9	86.8
46	Turkmenistan	7.0	4.5	6.2	5.6	7.3	7.1	8.7	7.7	9.6	8.3	7.9	6.3	86.2
47	Mauritania	8.4	6.2	8.0	5.0	7.0	7.8	6.6	8.1	6.9	7.2	7.6	7.3	86.1
48	Cambodia	7.8	5.7	7.5	8.0	7.2	6.6	8.3	7.6	7.1	6.2	7.2	6.6	85.8
49	Iran	6.5	8.7	7.3	5.0	7.4	4.3	8.0	5.8	8.7	8.5	9.0	6.5	85.7
50	Moldova	7.0	4.7	7.3	8.4	7.2	7.2	8.3	7.0	7.1	6.5	7.7	7.3	85.7
50	Bhutan	6.5	7.5	7.0	6.7	8.7	7.8	7.7	6.7	8.3	4.6	7.7	6.2	85.4
52	Papua New Guinea	7.5	3.5	8.0	7.9	9.0	7.3	7.8	7.8	6.1	7.0	6.7	6.0	84.6
53	Belarus	7.7	4.3	6.7	5.0	7.2	6.7	9.3	6.6	8.8	6.5	8.5	7.1	84.4
54	Bosnia	6.1	8.0	8.5	6.0	7.2	5.5	7.9	5.4	5.3	7.3	8.6	8.5	84.3
55	Bolivia	7.7	4.2	7.3	7.0	8.5	6.4	7.4	7.6	7.0	6.2	8.5	6.4	84.2
56	Angola	8.6	6.9	5.9	5.0	9.0	4.0	8.4	7.6	7.5	6.2	7.5	7.2	83.8
56	Georgia	6.3	6.8	8.1	5.7	6.9	5.4	8.4	5.9	5.9	7.7	8.3	8.4	83.8
58	Israel	7.2	8.1	9.0	3.8	7.5	3.9	7.5	7.2	7.9	5.5	8.0	8.0	83.6

59	Philippines	6.9	5.7	7.0	7.2	7.6	5.9	8.3	5.9	6.8	7.4	7.8	6.9	83.4
60	Indonesia	7.0	7.3	5.9	7.5	8.0	6.3	6.8	6.7	6.8	7.1	7.0	6.9	83.3
61	Lesotho	9.1	4.6	5.6	6.0	5.6	8.2	7.6	8.5	6.8	6.3	6.9	6.5	81.7
61	Nicaragua	7.5	5.7	6.5	6.8	8.4	7.5	6.3	7.5	5.4	6.5	7.1	6.5	81.7
63	Zambia	8.8	6.4	5.2	6.7	7.4	8.1	7.8	7.9	5.8	5.5	5.5	6.5	81.6
64	Azerbaijan	6.0	7.8	7.3	5.3	7.0	5.9	8.1	5.5	6.9	7.2	7.5	6.5	81.0
65	Cape Verde	7.9	4.8	4.8	8.2	6.2	7.8	7.3	7.2	6.4	5.8	6.4	7.9	80.7
66	Guatemala	6.8	6.0	6.9	6.7	8.0	6.7	7.2	6.6	7.1	7.3	6.0	5.3	80.6
67	Maldives	7.7	6.5	4.9	7.0	4.9	7.1	7.6	7.1	7.7	6.3	7.6	6.0	80.4
68	China	8.8	5.1	7.8	6.3	9.0	4.0	8.3	6.6	8.9	5.2	7.0	3.3	80.3
68	Ecuador	6.2	6.0	6.5	7.3	7.8	5.9	7.1	6.8	6.4	6.7	7.9	5.7	80.3
70	Serbia	6.0	7.3	7.9	5.5	7.5	6.5	7.4	5.0	6.1	6.3	8.0	6.6	80.1
71	Djibouti	7.7	6.4	5.5	5.2	6.2	7.1	7.4	7.3	6.2	6.5	6.9	7.6	80.0
72	Swaziland	8.8	4.0	4.0	5.5	6.1	7.8	8.5	7.5	7.5	6.5	6.9	6.9	80.0
72	Russia	7.0	5.4	7.5	6.5	7.9	3.7	7.9	5.9	8.7	7.0	8.0	4.2	79.7
74	Comoros	6.7	3.6	5.3	6.0	6.1	7.3	8.1	8.5	6.9	7.0	6.7	7.4	79.6
75	Tanzania	7.4	7.0	6.4	6.0	6.9	7.2	6.3	7.6	5.8	5.7	5.8	7.0	79.1
76	Cuba	6.5	4.7	5.5	6.8	7.2	6.1	7.6	4.0	7.8	7.7	7.0	7.7	78.6
77	Dominican Republic	6.5	5.4	6.1	8.3	8.1	5.6	5.8	6.9	7.0	6.1	7.0	5.6	78.4
78	Sao Tome	7.9	4.5	5.1	7.4	6.1	8.3	7.4	7.9	5.3	5.8	6.2	6.4	78.3
79	Venezuela	6.5	5.0	6.8	6.9	8.0	4.6	7.1	6.3	7.4	6.6	7.5	5.2	77.9
80	Algeria	6.1	6.8	7.2	5.9	7.3	4.0	7.5	6.8	7.6	6.7	6.2	5.7	77.8
81	Peru	6.9	4.2	6.9	7.5	8.1	5.7	6.4	6.4	5.5	7.4	7.0	5.5	77.5
82	Jordan	6.7	7.8	6.5	4.7	7.5	6.6	6.0	5.6	6.7	6.0	6.5	6.7	77.3
83	Gambia	6.9	5.8	4.2	6.0	7.0	7.5	7.9	6.6	6.8	5.8	5.9	6.5	76.9
84	Saudi Arabia	6.3	6.2	7.7	3.4	7.0	2.3	8.8	4.3	9.1	7.3	7.7	6.8	76.9
85	Mozambique	7.8	2.2	4.7	7.8	7.2	7.4	7.3	8.0	7.0	5.8	5.6	6.0	76.8
86	Madagascar	8.5	2.5	5.1	5.0	7.2	7.4	6.0	8.7	6.0	5.8	7.0	7.5	76.7
87	Fiji	5.9	4.0	7.5	6.0	7.5	5.9	8.7	4.4	5.9	7.0	8.2	5.6	76.6
88	Morocco	6.6	7.1	6.8	6.2	7.6	6.6	7.3	6.0	6.6	5.1	5.7	4.2	75.8
89	Mali	8.5	4.4	6.1	7.4	6.6	8.5	4.7	8.6	4.6	5.9	3.7	6.6	75.6
89	Thailand	6.8	6.0	7.7	4.4	7.5	3.6	7.7	5.5	6.2	7.0	7.7	5.5	75.6
91	El Salvador	7.4	5.6	6.0	7.0	7.6	6.0	7.0	6.5	7.0	6.3	3.9	5.2	75.5
92	Turkey	6.7	6.2	7.6	5.0	8.2	4.6	6.0	5.2	5.5	6.7	7.5	6.2	75.4
93	Gabon	6.9	6.2	3.0	6.0	8.1	5.2	7.5	7.0	6.5	5.6	7.2	5.8	75.0
94	Honduras	7.2	2.0	5.3	6.5	8.7	7.2	7.4	6.6	6.1	6.2	6.3	5.4	74.9
95	Macedonia	5.4	4.6	7.4	7.0	7.4	6.0	7.6	5.1	5.3	5.8	6.6	6.4	74.6
95	Vietnam	6.6	5.0	5.3	6.0	6.2	6.1	7.2	6.0	7.0	6.4	6.9	5.9	74.6
97	Micronesia	7.7	2.9	5.0	8.6	7.3	6.6	6.9	7.2	2.5	5.7	5.4	8.2	74.0
98	India	8.0	3.2	7.0	6.9	8.9	4.6	4.8	6.7	6.0	6.6	6.0	4.2	72.9
98	Namibia	7.2	5.0	5.4	7.6	8.9	6.0	4.7	7.1	6.0	5.5	3.2	6.3	72.9

100	Benin	6.9	5.2	4.0	6.7	7.4	7.0	6.7	8.1	5.2	5.2	3.8	6.6	72.8
101	Kazakhstan	6.2	3.6	5.2	4.0	6.5	6.0	7.7	5.5	6.8	6.5	7.8	6.6	72.4
101	Samoa	6.8	3.2	5.0	8.2	6.9	6.1	6.7	4.8	4.6	6.3	5.4	8.4	72.4
101	Suriname	6.5	3.9	6.1	6.7	8.3	6.2	6.4	4.9	6.0	6.0	5.4	6.0	72.4
104	Paraguay	6.6	1.3	6.2	6.0	7.7	6.2	8.3	6.0	7.1	5.0	7.7	4.2	72.3
105	Guyana	6.3	3.6	5.7	7.9	7.8	6.4	6.4	5.7	5.4	6.7	5.1	5.2	72.2
105	Mexico	7.0	4.0	5.8	7.0	8.4	6.0	6.1	5.7	5.1	5.8	4.8	6.5	72.2
107	Senegal	7.0	5.5	6.0	5.1	7.1	6.0	5.7	7.0	6.0	6.0	4.0	5.5	70.9
108	Ukraine	6.5	3.2	7.2	7.3	6.7	5.0	7.3	4.5	5.9	3.0	7.9	6.3	70.8
109	Armenia	5.8	7.5	5.0	6.7	6.0	5.6	6.5	6.0	5.5	4.5	6.0	5.6	70.7
110	Belize	6.8	5.5	5.2	6.9	7.6	5.8	6.5	5.7	3.8	5.7	5.0	5.7	70.2
111	Libya	6.2	4.0	5.6	4.0	7.3	5.3	7.4	4.5	8.1	5.6	7.0	5.0	70.0
112	Albania	6.2	2.7	5.4	7.5	6.1	6.3	7.2	5.9	5.4	5.5	5.7	5.8	69.7
112	Cyprus	4.9	4.2	8.3	5.2	7.5	4.2	5.5	3.8	3.5	5.0	8.4	9.2	69.7
114	Seychelles	6.7	4.8	5.4	4.7	6.8	3.9	7.6	4.1	6.3	6.0	6.5	6.7	69.5
115	Grenada	5.7	3.0	4.9	7.9	7.1	5.8	6.5	4.1	4.9	5.4	5.7	8.0	69.0
116	Brunei Darussalam	5.9	4.9	6.7	4.2	7.4	3.2	7.7	3.3	6.8	6.3	7.4	4.7	68.5
117	Brazil	6.3	3.3	6.1	5.0	8.8	3.7	6.2	6.0	5.6	7.1	4.9	4.6	67.6
118	Malaysia	6.3	5.0	5.9	3.6	6.9	4.2	5.9	5.1	6.5	6.3	5.7	5.8	67.2
119	Trinidad	5.5	3.6	5.2	6.7	7.7	4.0	6.4	5.5	5.4	5.7	5.9	5.4	67.0
120	Botswana	9.2	6.0	3.4	6.0	6.9	5.3	5.4	6.2	4.8	3.9	2.8	6.0	65.9
121	Jamaica	6.1	2.4	4.3	6.5	6.5	6.0	6.9	6.0	5.4	5.6	4.0	6.0	65.7
122	Tunisia	5.6	3.4	5.1	5.1	7.2	4.3	6.6	5.9	7.3	5.9	6.2	3.0	65.6
123	Ghana	6.8	5.0	5.1	8.0	6.8	5.0	5.5	6.9	4.5	2.4	3.9	4.7	64.6
124	Antigua and Barbuda	4.9	3.3	4.9	7.9	6.9	4.6	6.0	4.9	5.5	5.2	4.6	5.4	64.1
125	South Africa	8.4	7.0	4.9	4.0	8.5	4.2	5.0	5.7	4.2	3.9	4.4	2.5	62.7
126	Kuwait	5.5	4.4	4.7	4.1	6.1	2.9	6.7	3.3	7.0	5.1	6.9	5.3	62.0
127	Bahamas	6.2	3.6	5.3	5.4	7.2	3.7	5.9	4.3	3.0	5.4	5.3	5.2	60.5
128	Romania	5.3	3.5	5.2	5.2	6.1	5.2	5.9	5.2	4.8	3.4	4.7	5.4	59.9
129	Croatia	5.1	6.3	5.7	5.0	5.5	5.3	4.4	4.1	4.5	3.9	3.9	5.7	59.4
130	Panama	6.4	3.1	4.4	5.0	7.5	5.6	4.6	5.4	4.7	5.0	2.9	4.0	58.6
131	Barbados	4.1	3.3	5.5	6.9	7.0	5.0	5.9	2.6	3.0	5.3	4.8	5.1	58.5
131	Bulgaria	5.1	4.1	4.0	5.7	6.0	4.3	5.4	4.6	4.7	5.2	3.9	5.5	58.5
133	Mongolia	5.8	1.0	4.1	2.1	5.4	5.5	6.0	5.3	6.2	4.8	4.7	6.9	57.8
134	Bahrain	5.3	3.1	6.0	3.7	5.0	3.3	7.0	3.4	4.7	3.7	6.0	5.6	56.8
135	Montenegro	5.4	4.1	6.1	2.5	4.3	4.0	4.3	3.6	5.6	4.6	6.0	5.3	55.8
136	Latvia	4.9	4.9	4.6	5.0	6.0	5.0	4.7	4.2	3.8	3.0	4.4	4.0	54.5
137	Qatar	4.7	3.3	5.3	3.3	5.0	4.6	6.8	2.6	5.0	2.3	4.9	4.9	52.7
138	United Arab Emirates	5.0	3.6	4.3	3.4	5.5	2.6	7.0	3.9	5.9	1.9	3.8	4.3	51.2
139	Estonia	4.8	4.8	5.1	4.0	4.9	3.7	4.8	3.8	3.5	2.6	5.7	3.3	51.0
140	Costa Rica	5.6	4.2	4.0	4.8	6.6	4.6	4.1	3.5	3.5	2.2	3.3	4.5	50.9
141	Hungary	3.7	3.4	3.4	5.0	6.1	4.3	5.7	3.8	4.0	1.9	5.3	4.3	50.9
142	Slovakia	4.3	1.8	4.2	5.3	6.2	4.2	4.0	4.1	4.3	2.0	4.2	4.2	48.8

143	Lithuania	4.9	3.1	3.9	5.4	6.2	4.5	4.4	3.5	3.5	2.0	3.0	4.3	48.7
144	Malta	3.8	6.1	3.9	4.6	4.5	3.5	4.3	3.4	3.5	4.3	1.6	4.8	48.3
145	Poland	4.8	3.0	3.2	6.4	4.8	4.3	4.2	3.8	3.8	2.0	3.3	4.0	47.6
146	Oman	4.6	1.3	3.0	1.1	2.0	3.9	6.3	4.4	6.6	5.3	6.9	2.0	47.4
147	Greece	4.9	2.6	4.3	5.0	5.0	3.7	4.0	3.6	3.9	3.1	1.6	3.7	45.4
148	Mauritius	3.6	1.1	3.5	2.1	5.9	3.8	5.1	4.1	3.9	3.5	3.0	2.8	42.4
149	Czech Republic	3.8	3.1	3.2	4.8	3.9	3.4	3.7	3.8	3.5	2.0	3.5	3.4	42.1
150	Spain	3.9	2.1	6.2	1.6	5.0	3.4	1.4	2.4	2.8	5.2	5.6	2.0	41.6
151	Argentina	3.8	1.5	4.0	4.0	5.2	4.5	3.4	3.9	3.7	1.9	2.7	2.8	41.4
151	Uruguay	5.1	1.1	2.0	5.9	5.1	3.7	2.9	4.0	2.5	3.0	2.3	3.8	41.4
153	South Korea	4.0	3.9	4.0	5.3	2.4	1.6	3.9	2.0	2.7	1.0	3.3	6.5	40.6
154	Italy	3.7	3.5	4.0	3.0	4.5	3.8	3.8	2.5	2.1	3.7	3.3	2.0	39.9
155	Germany	3.9	4.3	4.9	2.8	5.3	2.8	2.3	1.9	2.7	2.5	1.8	2.1	37.3
156	Slovenia	4.0	1.7	3.4	3.5	5.2	3.0	3.2	3.5	3.5	3.0	1.1	2.0	37.1
157	Chile	3.8	2.0	3.9	2.1	4.6	3.7	2.0	3.8	3.9	2.0	1.5	3.0	36.3
158	France	4.1	3.1	6.0	2.0	5.5	3.0	1.7	1.4	3.2	1.0	1.8	2.0	34.8
159	Singapore	2.9	1.1	3.0	2.7	2.9	3.1	4.0	1.5	4.3	1.0	4.0	2.8	33.3
160	United Kingdom	3.0	3.0	4.5	2.0	4.5	1.7	2.0	1.8	2.6	3.0	2.7	2.1	32.9
161	United States	3.5	4.0	3.2	1.0	5.5	2.3	3.0	1.8	4.2	1.3	2.0	1.0	32.8
162	Portugal	4.3	1.0	2.5	2.1	3.6	3.8	1.5	4.0	3.5	1.0	1.3	3.2	31.8
163	Japan	4.3	1.1	3.8	2.0	2.5	2.3	1.8	1.2	3.4	2.0	1.7	3.6	29.7
164	Belgium	3.2	1.6	4.7	1.1	4.6	2.5	1.8	1.4	1.5	1.6	3.0	2.0	29.0
165	Luxembourg	2.1	1.8	3.7	1.2	2.5	1.8	3.3	2.6	1.6	2.0	3.0	2.3	27.9
166	Netherlands	3.4	3.0	4.9	2.2	3.7	2.0	1.3	1.4	1.4	1.0	1.0	2.0	27.3
167	Canada	3.3	2.4	3.0	2.1	5.0	1.5	1.5	1.2	2.0	1.0	1.8	1.5	26.3
168	Austria	2.8	2.2	3.5	1.1	4.9	1.9	1.3	1.4	1.5	1.0	2.0	2.3	25.9
169	Australia	2.9	2.0	3.5	1.1	4.4	2.3	1.0	1.4	2.5	0.9	1.5	1.1	24.6
170	Denmark	3.2	1.9	2.5	2.0	1.9	2.1	1.0	1.4	1.5	1.0	1.0	2.0	21.5
171	New Zealand	1.1	1.2	2.9	2.1	4.0	3.0	1.1	1.4	1.5	1.0	1.0	1.1	21.4
172	Iceland	1.0	0.9	1.0	3.2	2.8	3.0	1.3	1.3	2.1	1.0	0.8	2.5	20.9
173	Switzerland	2.9	1.7	2.6	2.0	2.6	1.5	1.0	1.4	1.7	1.0	1.0	0.9	20.3
174	Ireland	1.9	1.5	1.0	2.0	3.0	2.0	1.5	2.0	1.5	1.0	1.0	1.5	19.9
175	Sweden	3.2	3.0	1.3	2.0	2.1	1.2	1.0	1.2	1.4	0.9	1.0	1.5	19.8
176	Finland	2.6	1.6	1.0	2.1	1.9	2.0	0.9	1.2	1.5	0.9	0.7	2.0	18.4
177	Norway	2.0	1.6	1.0	1.1	2.0	1.8	1.0	1.3	1.5	1.0	1.0	1.5	16.8

Source: Fund for Peace, *Failed States Index 2008* (Washington, DC: 2008), [http://www.fundforpeace.org/web/index.php?option=com\\_content&task=view&id=99&Itemid=140](http://www.fundforpeace.org/web/index.php?option=com_content&task=view&id=99&Itemid=140) (accessed February 18, 2008).



# APPENDIX G

## Maps of Vietnam

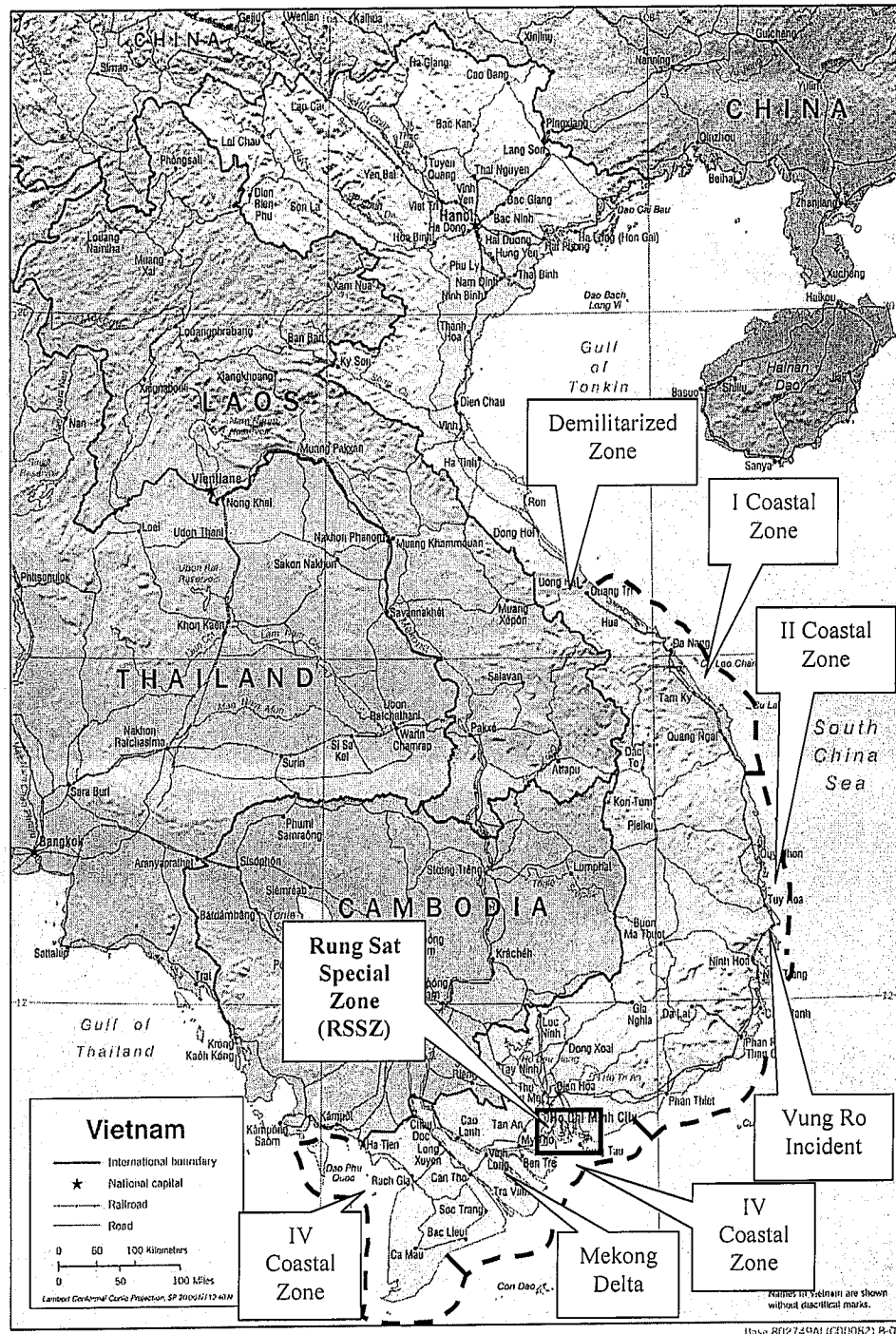


Figure 1 – General Map of South Vietnam

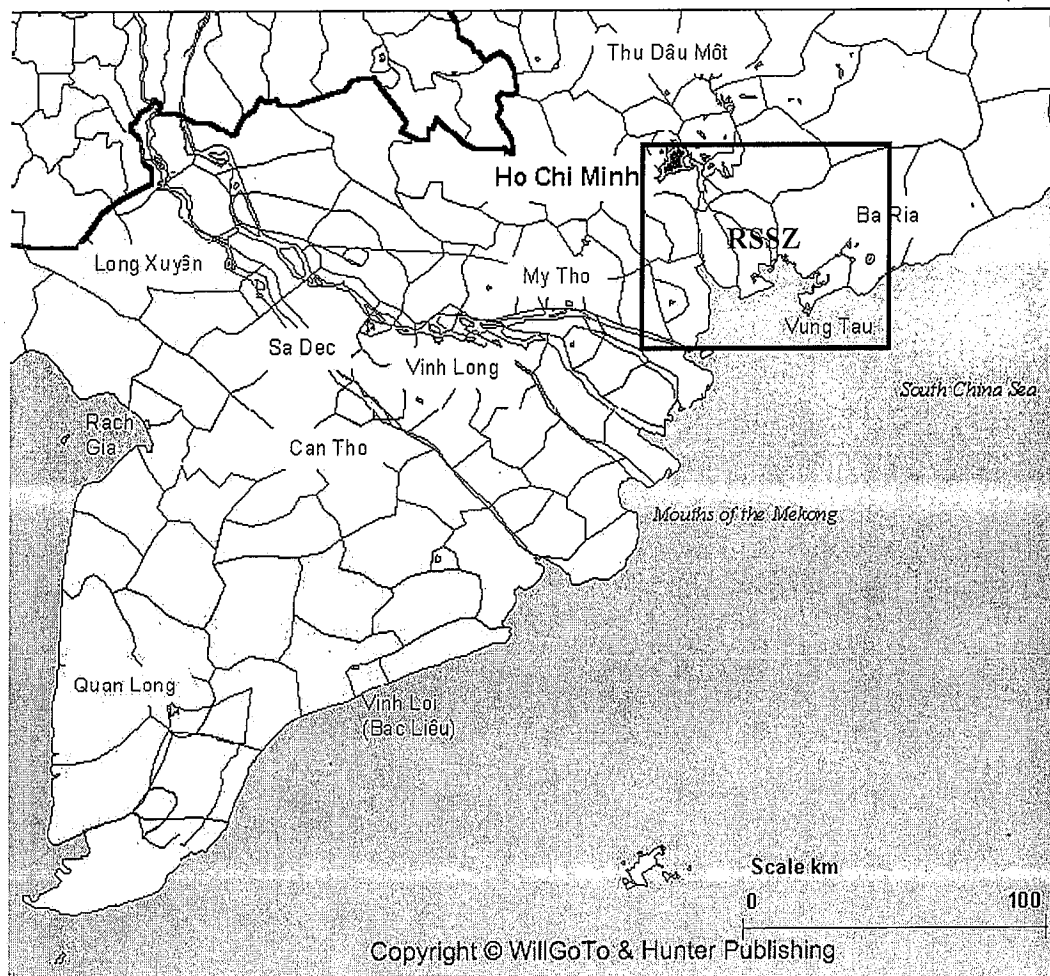
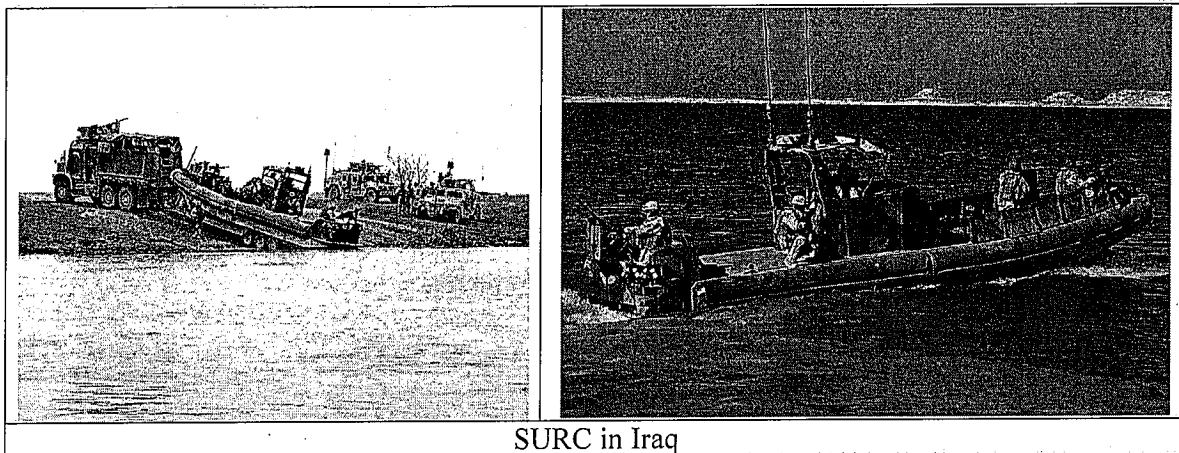


Figure 2 – Mekong Delta and the Rung Sat Special Zone

## APPENDIX H

### Small Unit Riverine Craft (SURC)



#### Mission:

Primary Mission	Provide tactical mobility and a limited weapons platform for the ground combat element of a Marine Air Ground Task Force in littoral and riverine environments.
Secondary Mission	Command and control, reconnaissance, logistic/resupply, medevac, counter-drug operations, humanitarian assistance, peacekeeping, and non-combatant evacuation operations.

#### General Characteristics:

Hull Type:	Aluminum with full length beaching plates
Collars:	High strength solid cell foam collar provides stability, redundant buoyancy, and small-arms ballistic protection
Length:	38 ft (12 m) (with transom platform)
Beam:	10 ft 2 in (3.1 m) (collars removable for C-130 transport)
Draft:	24 in (0.61 m) static
Displacement:	22,000 lb (10,000 kg) combat load
Weight:	17,500 lb (7,900 kg) craft and trailer
Propulsion:	Twin Yanmar 6LY2A-STP diesel engines, 440 bhp (330 kW) at 3300 RPM; Twin Hamilton waterjets HJ292 Fuel: JP-5, JP-8, and marine diesel #2
Speed:	35 knots (65 km/h) cruise, 39 knots (72 km/h) sprint



Acceleration:	Accelerate to 25 knots (46 km/h) in less than 15 seconds
Turning:	Turn 180 degrees in less than three boat lengths
Range:	Greater than 250 NM
Crew:	2
Capacity:	16 troops (285 pounds per passenger)
Weapons:	3 mounts for heavy machine gun and smoke launchers
Ballistic protection:	Propulsion system armored against mobility kill
Navigation:	Ritchie magnetic compass Integrated AN/PSN-11 GPS (PLGR) Raymarine SL72 LCD radar ST 60 depth sounder
Communications:	Raymarine RAY53 VHF marine band radio SINCGARS (VHF tactical) radio and AN/VIC-3 internal stations

Source: *Small Unit Riverine Craft (SURC)*, <http://www.globalsecurity.org/military/systems/ship/surc.htm> (accessed February 18, 2008).

# APPENDIX I

## Map of Iraq

